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No. 1

CULTIVATION OF BARLEY.

We have frequently called attention to the fact that American barley is far inferior to that grown in England. The wheat grown in "the Genesee country" and in Canada West, is often *superior* to the best English wheat; but our best barley will not compare with an average sample of that grown in the moist climate of Great Britain. The reason of this is, doubtless, owing in part to the shortness of our growing season. It is not improbable, however, that we might produce much better samples of barley if we were more careful in selecting the seed, preparing the ground, sowing early, and in cleaning the crop for market.

Barley requires a dry, warm, active, mellow soil. What are popularly known as "barley soils" in England are rather too light and sandy for wheat, without the consolidating action of the sheep which eat off the turnips on the land during the winter. Unfortunately, light, sandy soil is very often deficient in plant-food, and needs to be manured in some way before it will yield maximum crops of barley. This is the great difficulty in growing barley in this country. In England, the light barley soils are enriched by the growth and consumption on the land of a heavy crop of turnips. But as yet we have no crop that occupies the same position in any of our systems of rotation. We can enrich our land for wheat by plowing in clover; but this cannot be done for barley.

The usual way of enriching land for barley is by manuring the soil for corn. We know of no better plan. We might use some artificial manure for barley, such as superphosphate of lime or Jarvis & Baker's Island guano, mixed with Peruvian guano. Superphosphate of lime and the phosphatic guano are found in England to have a better effect on barley than on wheat. It is better, however, to mix them, half and half, with Peruvian guano. We do not say that these manures will *pay*, but they are worth trying, especially on poor land.

By plowing the land in the fall after corn, barley may be sown in the spring without again plowing the land, except with a gang plow or cultivator. The advantages of this plan are, that it saves labor in the spring, when other work is pressing, and the barley can be sown earlier.

Barley should be sown as early as the ground is in good working condition—the earlier the better. It is the first crop to be attended to in the spring. But as it requires fine tilth and a mellow soil, working it while it is wet must be specially avoided.

We usually sow too little barley seed. We would never sow less than two bushels per acre, and 2½ bushels if sown broadcast is usually none too much. When the plants are up out of the ground, the barley may be rolled, if not done before. Of course, the land must be dry enough not to clog.

In England, clover is generally sown with the barley crop in the spring. This is not generally done in this section with us; but where it is desirable, clover can be sown with barley to advantage if the ground is clean. In this case, it is well to sow a bushel of plaster per acre on the land, not so much for its effect on the barley, as on the young clover plants. It *may* benefit the barley somewhat, but is always sure to help the clover more than enough to pay the slight cost of the plaster.

In saying that barley likes a light sandy soil, we would not be understood as asserting that it will not succeed on soils of a heavier character. This is not the case if such lands are thoroughly worked and got into a mellow condition. The heaviest crop of barley we ever saw was on a strong clay soil that had been summer fallowed the year before, with the intention of sowing it to wheat. It so happened that the wheat could not be sown, and barley was sown the following spring. The result was an immense crop of barley. We also saw the same thing, some years ago, on the farm

of JOHN JOHNSTON, in Seneca County, N. Y. He had a field summer fallowed for wheat, but gave up the idea of sowing it on account of the ravages of the midge. He sowed it to barley the next spring, and had a noble crop. These instances show that *thorough cultivation* will enable somewhat heavy land to produce large crops of barley.

COFFEE SUBSTITUTES—CULTIVATION OF CHICORY.

JOSEPH HARRIS, Esq.—*Dear Sir:* Knowing you to be well posted on English agriculture, stock raising, etc., and, I presume, with the specialities or miscellaneous branches of agriculture which abound in England, it has occurred to me that you would be the most likely person to be able to tell us something about the culture of chicory; but more especially what the prospects for profit and success would be to introduce its culture into this country.

I know that chicory is used very extensively in that country, by coffee roasters and dealers, to adulterate their coffee with, and by families and those who prefer to buy it unadulterated, i. e., whole, to mix with theirs; that it comes nearer to coffee than any other substitute, is not easily detected, and is said indeed to *improve* the coffee itself; that people there do not object to the use of chicory, but object to pay coffee price for it, and mix it themselves, and prefer to have it rather than their coffee without it.

Now, coffee is high in this country, and is likely to continue so, and everybody is looking around for, and using some substitute, either wholly or to mix with coffee, and are generally falling back upon the old articles, rye, corn, peas, etc., while dozens of other articles are suggested by one and another, all of which are, after all, really but poor substitutes, being insipid, flavorless, not stimulating, and the merest makeshifts.

Chicory has not, I presume, been much used heretofore in this country. But there is now a tariff on it (I am told) as well as on coffee; and the high price of the latter, with the people loudly calling for substitutes, and the tariff on chicory, would it not be likely to become a special crop—one that a demand might be created for, and be made to pay if introduced? Can you oblige me with any information, or your opinion, first, on these points; second, on its mode of culture, preparation for market, average yield and price, and any other statistical matters concerning it, with reference to England, and if any examples of its culture have come under your observation in this country? If you can, would it not be worth embodying in an article in your excellent *Genesee Farmer*, as it is a subject claiming a good deal of attention, and I think would prove interesting to very many of your readers?

I do not see that the seed is named in any seed catalogue that I have got hold of—Thorburn's, Buist's, Dreer's, and others. It can not probably be procured in this country. Yours truly,

St. Louis, Mo.

C. SANDERS.

Chicory (*Cichorium intybus*) was first introduced into England by ARTHUR YOUNG, in the year 1780. It was principally grown for sheep. It was found

to flourish upon almost any kind of land, and it is thought that it will keep more sheep per acre, during the early summer months, than any other kind of herbage plant. For this purpose the seed is sown broadcast in the spring, at the rate of from seven to twelve lbs. per acre.

When raised for fodder, the seed is sown in drills about nine inches apart, and the plants thinned out with the hoe six inches apart. With clean culture, the plants will last for eight or ten years, and produce abundant crops. When sown in drills, 4 lbs. of seed per acre is sufficient.

The plants grow from six to eight feet in height. The stem is branched, and clothed on all sides with leaves, up to its very top. It is, therefore, very desirable that the plants be not too thick.

It will be seen that the cultivation of chicory for fodder is very similar to that of lucerne. There is this difference, however, between the two crops: lucerne requires very rich land, while chicory will grow on the poorest soils, and is, therefore, well adapted for renovating impoverished farms.

Chicory has been grown on the continent of Europe, as a "substitute for coffee," for many years, and it is now extensively cultivated in Yorkshire and other parts of England for the same purpose. "Morton's Cyclopaedia of (English) Agriculture," speaking of it, says: "As a plant of such speedy growth, and in all seasons, wet or dry, it can not be too strongly recommended for general use, and more particularly for the small occupiers. Cow-keepers would do well to cultivate it, and cottagers ought by all means to employ it in a *double manner*."

The "double manner" refers to the use of the roots for coffee, while the stems are used for fodder. VON THAER, a well known and reliable German agricultural writer, says: "Of all plants which have been proposed as substitutes for coffee, and which when roasted and steeped in boiling water yielded an infusion resembling coffee, chicory is the only one that has maintained its ground."

When grown as a root crop, the cultivation of chicory is very similar to that of the carrot—in soil, preparation, manuring, seeding, weeding, harvesting, etc.

When dug, the tops are neatly cut off, and the roots washed and cut into slices by hand or with a turnip cutter. The slices are then dried in a kiln, and afterward sold to the grocers, who roast and grind it as they do coffee.

An average crop of fresh roots may be stated at eight tons per acre, and the price in England at

\$15 per ton. This would give \$120 per acre. The cost of culture would be about the same as carrots.

According to the analysis of Dr. ANDERSON (High. Soc. Trans., 1853, pp. 63 and 655), the fresh roots contain 80 per cent. of water. A crop of eight tons, therefore, would give 3,200 lbs. of dry roots (or coffee) per acre.



COMMON CHICORY PLANT.

We annex an excellent engraving of the leaves and flower of chicory. The plant in appearance is not unlike the dandelion. The "dandelion coffee" sold in our drug stores, is chiefly, if not entirely, chicory.

CANADA.—The last London *Mark Lane Express* says: "Previous to the exhibition in London and Paris in 1851 and 1855, few people gave Canada credit for aught beyond dense forest and hyperborean climate; and they were amazed to find her sustaining pretensions which indicated a fine climate, a fertile soil, wealth in mine and forest, and a people who add to energetic industry a full average excellence in the mechanic arts. Her soil is boundless and fertile; her forests, extending over 360,000 square miles, have no superior on the face of the globe, and are waiting only the application of labor and capital. Her past progress is marvellous, and her future will be more so."

CULTIVATION OF SPRING WHEAT.

THE principal aim in the cultivation of spring wheat should be to get the soil into a fine, mellow condition. It does best after corn that has been well cultivated. The soil should be warm and active. We think it seldom does well on sod ground plowed in the spring, and sowed at one furrow. On clover sod, however, that has been summer fallowed, it succeeds admirably. It is frequently sown on land that is too low and soft for winter wheat. Heavy crops are occasionally obtained from rich soil of this description. But with us the result has not generally been satisfactory. If the summer is dry and hot, a good crop may be obtained; but in a cool, moist season, the mildew or rust is almost sure to strike it.

In regard to the time of sowing, there is much difference of opinion. Many farmers prefer to prepare the land in the fall, and then sow as early as the ground will work nicely in the spring. We would not sow as long as the ground is wet and clammy. Nothing is gained by burying seed in a cold soil surcharged with water, and land plowed while it is wet can never be got into good tilth.

Others prefer to sow spring wheat quite late—say the middle of May. They say that by doing so, all danger of the midge is over before the wheat comes into flower. We have known instances where late sown spring wheat has escaped the midge, while that which was sown earlier was much injured.

Our rule would be to sow early, if the ground can be got into good condition. If not, wait till after the other spring crops are sown.

It is very desirable to give the plants a good start. The roots of winter wheat ramify through the soil much more than spring wheat. The latter, like barley, have a more circumscribed range. It is, therefore, more necessary to have the "food of plants" in the soil in a more concentrated and more available condition for spring than for winter wheat.

Mineral manures are seldom needed for winter wheat. But, for the reasons already mentioned, it is not improbable that they may prove beneficial on spring wheat. Last spring we made some experiments with the view of testing this point. The wheat was sown May 10th, and the manures were sown broadcast the next day. The plots were a quarter acre each. One plot was dressed with 50 lbs. of plaster, or 200 lbs. per acre. The next plot received 50 lbs. superphosphate of lime (200 lbs. per acre.) The next plot, 50 lbs. superphosphate

of lime and 100 lbs. of unleached wood ashes (400 lbs. per acre.) Two plots, one on each side, were left without manure of any kind. The result was, that *we could see very little difference between any of the plots.* Those that had no manure of any kind were nearly, if not quite as good as those which were top-dressed with plaster, superphosphate, ashes, etc. The land was an old meadow, that had lain in grass for many years. It was underdrained and broken up in 1860, and planted to corn, and sown to wheat the next spring. The crop was rather poor on the whole. The variety was the Fife, the seed being obtained from Canada. We believe this variety one of the best, but it is perhaps better adapted to dry upland than to soils of a softer character.

SOWING CLOVER SEED.

WERE we gifted with a poet's genius, we would sing of CLOVER. Not of its beauty, not of its fragrance merely, but of its utility. It is the grand renovating plant of American agriculture. Its roots bring up nutriment from the subsoil, and its leaves sip fertility from the atmosphere.

"Raise your own clover seed, and sow it with an unsparing hand," is our standing advice to all wheat growers. If land will produce a good crop of clover, you may be sure it contains all the *mineral* plant-food required to produce a maximum crop of wheat, or corn, or barley, or oats, or any other cereal.

Any thing which increases the growth of clover indirectly increases the growth of wheat and other cereal crops. In this way plaster or gypsum becomes a valuable fertilizer for the wheat grower. It has itself little direct effect on wheat, but it frequently increases the growth of clover to a considerable extent. This clover when plowed in for wheat, or if consumed on the farm either in the green state, or made into hay, furnishes manure of good quality. It may be said that the same is true of the grasses, oats, corn, etc. But there is this great difference between them. The clover *retains all the ammonia* it gets from the soil and the atmosphere, while the grasses and grains do not. The growth of grains and grasses always involves a certain loss of ammonia, but this is not the case with clover, peas, beans, and other leguminous plants.

Grow clover, then; grow it as a renovator; grow it for its food and for its fertilizing power. Grow it wherever it can be brought into the rotation. Sow it with wheat, sow it with barley,

so it with oats, sow it with corn. Sow it on a sandy soil, even if you intend to plow up the land the next spring.

"When shall we sow, and how?" We care not, only scatter it with a liberal hand. Some like to sow it on their winter wheat early in the spring, when there is a little snow on the ground. Others prefer to wait till the ground and weather are warmer. Some few think it better to harrow the wheat after sowing the clover, thus covering the seed and benefiting the wheat at the same time. Others, again, and we think wisely, prefer to sow on a frosty morning in April, after all danger of severe weather is over. Sow in the morning till the sun thaws the ground, and repeat the operation the next frosty morning.

If sown with barley or oats, let the ground be made fine before sowing the clover seed, and then run a light harrow on the ground, or roll it after the barley is up. The shallower it is covered the better. It will do very well on a moist soil if not covered at all.

"How much seed per acre?" We think many farmers err in being too sparing of seed. Four quarts or eight pounds per acre is the usual quantity. We would never sow less, and unless the soil is in excellent condition, would prefer to sow another quart. The English farmers, especially on light sandy soil, not unfrequently sow from 16 to 20 lbs. of mixed clover seed per acre. Our soil and climate are so well adapted to the growth of red clover, that such extreme thick seeding is not necessary, but thin seeding is generally poor economy.

PLASTER FOR POTATOES.—In this section, we think plaster or gypsum a profitable dressing for potatoes. Sometimes it does little, if any, good; but again the effect is quite beneficial, and as the cost is slight, it is always worth while to sow a bushel or so per acre at the time of planting, or after the potatoes are up. In some experiments of our own, not yet published, the effect of plaster was quite beneficial, especially in arresting the ravages of the disease.

How to Sow.—Look at that field of wheat. You can see every sweep of the sower's hand. What is the reason? He let his hand fall down after leaving the seed-bag or hopper, instead of raising it before throwing the seed. It is the great fault in sowing. Raise your hand up level with your head, or nearly, before throwing the seed, and then it will be scattered evenly. In sowing clover or other small seeds, this is very important.

LORD PALMERSTON ON UNDERDRAINING.

LORD PALMERSTON, the present Prime Minister of England, has written a long letter embodying the results of his experience in draining. "This valuable letter," says the *London Agricultural Gazette*, "remarkable because it was written with instant dispatch in the midst of momentous matters of national importance, is to be published in the Journal of the Royal Agricultural Society, and we shall then see the grounds upon which our gifted Premier could descend from the high region of war and politics to cope with engineers within the precincts of their own Institution upon a subject peculiarly their own."

REMUNERATIVE PATENTS.

WHATEVER doubt the sceptical may entertain as to the superiority of the United States over Europe in art, arms, and literature, it is certain that in one thing, at least, they "whip all creation," and that is, in making patents remunerative. In this country, patentees are often content if, by means of a patent, they can obtain some slight advantage over a competitor in respect of the cost of production, never dreaming that the invention will be required beyond their own works. Others, again, will protect what they consider a good thing, and leave the world to find out its merits, never troubling themselves further than to reply to applications for the patentee's terms for a license to use the patent. And even those who patent with the view of pushing their inventions to the utmost, will not unfrequently reject all offers for the privilege of working under their patent. Thus opportunities are neglected or frittered away, which would not only bring large profits to the inventor, but the benefits to be derivable to the public for his discovery are retarded, or perhaps entirely lost, new circumstances arising to render the patented process altogether inapplicable. In the United States, however, patentees seem to have learned the art and mystery of making money to an extent scarcely credible by sober-minded Europeans; but that there is no romance about the statements, or exaggeration of the facts, which every now and then are published, is manifest, from the pecuniary interest of the inventor being to estimate his profits at the lowest sum consistent with truth.

It is only when an extension is required of an expiring patent that the profits of a patentee are brought to light. The extension is sought in the States or in this country on the ground of inadequate remuneration; and to prove this, a sworn statement of the outgoings and incomings has to accompany the petition. From such accounts we learned that the original patentee of the sewing-machine had realized the large sum of £97,000, which was deemed by the Patent Commissioner disproportionate to the benefits conferred by his invention on the community, and he therefore, became entitled to a renewal of his patent. In a recent number of the *United States Railroad and Mining Register* we find that the inventor of the reaping-machine, which carried off a gold medal at

the 1851 Exhibition, applied for an extension of his American patent, but failed, from not being able to prove to the satisfaction of the Patent Commissioner the inadequacy of his profits. From the filed accounts it appears that the receipts from his manufacturing business nearly touched \$4,000,000, and that his clear profits amounted to \$1,409,000. To realize this sum from an implement of such limited use as a harvesting machine, is to the European mind almost incredible, but the truth cannot be questioned.

There are other American patents which we know to have been more profitable than this; but we cannot call to mind one English patent that has yielded to its owner one-third of this sum. A singular case occurred, some years ago, of a patent, during the first year of the grant, producing a profit of £20,000; but having to do with dress, the fashion changed, and there was an end of it. The *Times* reviewer of Dr. Percy's book on Metallurgy, refers to Dr. Muntz's patent for yellow metal, or ships' sheathing, as one of the most lucrative patents known, and bases his assertion on the fact that its proprietor died leaving property that was sworn under £600,000. This is, however, an unjust conclusion of the value of the patent; for Mr. Muntz's evidence, adduced before the Privy Council, when applying for an extension of this patent, showed that his profits did not exceed £55,000.

Again, the enormous fortunes made by Sir Richard Arkwright and the first Sir Robert Peel give no satisfactory evidence of the value of the patents which helped them to those fortunes; for it is not unlikely the greater bulk of their profits was derivable from their prudent mercantile enterprise, which, if otherwise directed, would most probably have yielded them similar returns. The fact then remains, that American patentees possess a secret which European inventors have as yet failed to discover, but which, as we think, is deserving of careful investigation, both on account of the patentees themselves, and of the public; for we hold that, in respect of the extended working of an invention really worthy of the name, the interests of the patentee and of the public are identical.—We would therefore advise that, instead of ignoring statements which cannot be controverted, the proprietors of valuable British patents should seek to apply the means by which American patentees are enabled to bring their inventions so extensively into use, and instead of obstinately persisting in a course which has created the odious term of "obstructive patents," follow in the steps of their more "cute" cousins.—*Newton's London Journal of Arts and Sciences.*

COWS—KICKING—CAUSE FOR IT.—It is a fact that stripping cows with a jerk is one cause for their kicking; and another prominent cause is, the finger nails of the one who milks are long and sharp, or rough and scraggy. Please examine Biddy's or Tommy's finger nails, and pare them off smooth and nice before letting them begin to milk, and it will pay in two ways at least. We shall have more milk, and our cows will stand and be milked quietly. Who would not dodge if pinched with sharp finger nails?—*BELA DUNBAR, North Chili.*

SPIRIT OF THE AGRICULTURAL PRESS.

HORSE RADISH FOR CATTLE.—The *Homestead* says horse-radish is good for cattle and horses when appetite fails, and good as a medicine in various diseases in either. It is to be cut fine and mixed with potatoes or meal, or both.

LARGE HOG.—The *Boston Cultivator* says JOHN COOPER, of New Hampshire, killed a hog last December that weighed 733 lbs. He was nineteen months and twelve days old. Up to the 20th of June, he received no corn, and after that eat 274 bushels.

HOGS PACKED IN THE WEST.—The *Cincinnati Price Current* has returns of the number of hogs packed at one one hundred and thirteen points in the West, which foot up comparatively as follows: in 1861, 1,568,083; in 1862, 1,863,782—increase, 300,699. The complete report will show an excess of fully 400,000. The crop will be the largest ever packed in the West.

APPLICATION OF MANURE.—N. REED, of Dutchess Co., N. Y., says in the *Country Gentleman*, that farmers in that section are becoming more in favor of applying their manure to grass land. The immediate effect is a diminution of the crops of corn and other grain, but in a few years the whole farm is increased in fertility. He advocates applying manure to grass land at the time of seeding. A heavy crop of grass is the result, and this, fed off by stock, he says, "is the best preparation for corn."

A THOUSAND PLOW PATENTS.—The *New York World* says: "It may surprise many of the multitude who use plows, as well as those who do not, to learn that about one thousand patents have been issued for alleged improvements in plows since the foundation of the American government. About two-thirds of these patents have been granted since the year 1847. Some curious investigator will doubtless mount this hobby, and give us a book about the origin and progress of the implement which the farming world is now trying to discard—if it can find anything better to use in cultivating the soil."

QUESTIONS FOR FARMERS.—A correspondent of the *N. H. Journal of Agriculture* asks the following questions:

Are raw potatoes wholesome food for an idle horse? Are they profitable to feed to a horse when they can be purchased at one-fourth the price of corn?

Is corn fodder good feed for sheep? Will they winter well on corn fodder without hay? Can corn sown broadcast or in drills, and cut up while green and cured, be raised as feed for sheep at a less price than hay? What is the process and what the expense of curing so acre?

What amount of turnips will a sheep eat daily and profitably?

Would straw and coarse hay be more valuable as food for stock if made as fine as meal? By what means can hay and straw be ground?

SUPERPHOSPHATE OF LIME FOR TURNIPS.—For the last dozen years we have repeatedly recommended superphosphate of lime as a manure for turnips. When drilled with the seed the effect is most astonishing. We have seen numerous instances where it has doubled and tripled and quadrupled the crop, and even more. There is no manure equal to it for turnips. In the last number of the *Massachusetts Ploughman*, A. J. ALDRICH states that he put a little of Cor's superphosphate of lime on an eighth of an acre of French turnips, and left a small piece without any to see the effect. "The result was," he says, "that

I had a good crop of turnips where the superphosphate was used; but the turnips were hardly worth pulling where it was not used. The proportion would be about one pound of turnips where there was no manure, [superphosphate,] to eight pounds where there was manure." In other words, the superphosphate increased the yield eight-fold.

SAVE THE MANURE.—"Recollect," says the *Ohio Farmer*, "that every shovelful of manure wasted is a loss to your crops, and consequently to your pocket."

SITTING HENS.—The *Ohio Farmer* says, "always choose the evening hour for sitting a hen." The reason assigned is that the hen, having a natural desire for roosting and resting at this time, will take to her duty more contentedly than if set in the morning. This is new to us, but there may be something in it.

SAWDUST AS A MANURIAL ABSORBENT.—F. J. KINNEY, of Wayland, Mass., gives in the *New England Farmer*, an interesting account of his use of sawdust for bedding, as a fertilizer and absorbent. In January, 1859, he commenced hauling sawdust and fine chips from a clothes-pin manufactory. There were two horses, seven head of cattle, and several swine on the farm, and in course of the year he used 100 cords of this material as bedding for these animals. The stable floors were covered with it about six inches deep, and as fast as that under the swine and cattle became saturated with urine, it was removed with the solid excrement to the manure cellar. The horse-bedding and manure was piled under a shed. In both cases it soon began to burn or firefang—this was remedied by running water upon it, mostly from the caves of the barn and sheds, by wooden troughs from the conductors, and by keeping it as solid as possible until drawn out for use.

Under a pair of steers kept for two months in the fall of 1859, at night, in a yard 14 feet square, he put one-third of a cord of sawdust three times a week. This laid until the next spring, when it yielded four cords of No. 1 manure. There was but little loss in bulk by decomposition—an increase in weight—a good deal of rain having fallen during the autumn. In his opinion, it can not be kept too moist, up to the point of leaching.

The stock which made 15 cords of No. 1 manure in 1858, made from 80 to 100 cords of No. 2 manure in 1859. The average time employed per cord was about three hours—in drawing, distributing, trampling and watering. The effect when applied to the soil, in comparison with barn manure, was fully equal, though not quite as lasting, and after the sawdust had lain two years, so as to become fully decomposed, it was considerably increased in value.

In closing his communication, Mr. KINNEY remarks: "Wherever I have examined the roots of a vegetable grown where sawdust, chip or leaves and stable manure had been used, I found them embracing with their delicate fibres every atom of the vegetable matter within their reach, and drawing their natural sustenance from them; and there is nothing I have ever tried as an assistant fertilizer that holds so much liquid or retains it so long, where only the air and sun operate upon it, as hard wood sawdust; and nothing that yields up this embryo vegetable so readily to the petitions of the rootlets."

LICK ON CATTLE.—A correspondent of the *N. H. Journal of Agriculture* says kerosine oil is the best thing in the world for this purpose. It kills them thickly, and does not injure the hair or health of the cattle.

UNDERDRAINING.—A correspondent of the *Farmer and Gardener*, who visited Scotland last year, says: "Any one who wishes to learn the beneficial effects of underdraining, should go to Scotland, and see what has been accomplished there. Scotland can feed twice the number of persons now that it could fifty years ago—all by draining."

FLAX.—The same writer says that, "owing to the American war, preparations have already been made in England and Scotland to sow ten times the breadth of flax that ever was sown before; and it is said that the 'Gem of the Ocean,' Ireland, will have a fourth of its surface covered with flax next [this] year."

FARMERS SELDOM FAIL.—The Massachusetts *Ploughman* states that out of 1,112 persons who took the benefit of the late bankrupt act in that State, only 14 were farmers. In this State, 2,550 took the benefit of the act, and only 46 were farmers. The profits of agriculture may be slow, but they are sure.

SANDY SOILS CAN BE STIRRED TOO MUCH.—A correspondent of the *Farmer and Gardener* thinks the New Jersey farmers use the plow, harrow and cultivator too frequently, and the roller too seldom. Sandy soils are too full of air, and require much heavy rolling to make them compact and retentive of moisture.

"WHAT BRANCH OF AGRICULTURE WILL PAY?"—The Minnesota *Farmer and Gardener* says this is the great question of the day at the West, and the general answer is, to "raise less wheat and more stock, horses, sheep, sorghum, flax, etc." It is thought that sheep and wool growing afford good promise of profits.

NOW IS THE TIME TO BUY FRUIT TREES.—The New York *World* urges farmers to avail themselves of the present low price of fruit trees, to plant largely, and adds: "The demand for fruit is almost illimitable—increasing with the improvement of the supplies—and the prices for really good fruit pay enough to satisfy any man of intelligence and energy who applies himself to the cultivation of orcharding."

IMPROVED HORSE STALLS.—The Germantown *Telegraph* contains the following description of a new plan for laying the floors of horse stalls. It appears to be an excellent one. "It consists in making the horse stall floor level fore and aft, and with an obliquity of three-quarters of an inch from each side to the center of the floor, where there is an opening made in the floor half an inch wide and six feet in length, or from a line of the back stall posts towards the manger six feet. The plank of the floor is laid crosswise of the stall, the plank being cut in two in the middle, and so laid that the ends are a half inch apart, thus forming the opening which I have described. This opening is provided for dropping the urine directly through the floor, instead of allowing it to flow on the floor from where it falls to the back end of the floor of the stall, thus wetting the greater portion of the floor, and when the horse lies down, wetting his body and

clothing, and especially his tail; for there is generally no provision made for conveying the urine farther than the rear of the stall.

"I place a galvanized sheet iron urine gutter under the opening in the floor, which has obliquity in itself, the manger end being two inches deep, and the discharge end six inches deep. It discharges into a plank urine gutter six inches deep and ten inches wide, which runs along behind the stalls under the floor, and is carried by a loose floor plank, which may be taken up at pleasure and the gutter cleaned out. This gutter has a good descent, so that the urine is discharged from it, but some dirt and refuse will get into it through the narrow opening in the stall floor. All the attention that my arrangement requires daily, is just to pass the fork tines through the slat in the floor.

"Those who use my improvement say that the bedding will keep drier and cleaner for forty days than it will for four as ordinarily arranged. The iron gutter costs \$1, and the wooden gutter behind the stalls and under the floor will cost about 75 cents per stall; otherwise this arrangement costs no more than the common way."

LOSS OF CATTLE IN CALIFORNIA.—The *California Farmer* of Feb. 7th says: "The late severe cold weather has destroyed a large amount of cattle, sheep, and swine. We have information from all sections, of quantities of stock that has perished by the cold, and the late floods, and as the short fed stock were poorly prepared to stand the severe cold weather, they have perished by the hundreds of thousands. Sheep have also perished in lambing, by reason of the severe weather following the exposure to the flood—and swine also. Horses, also, have perished. It is to be hoped that the trials and losses of the year will teach lessons of wisdom, and induce stock owners to be merciful to their stock, provide them with shelter for the wet season, and raise food for winter feed, such as root crops, and the saving of fodder that for years has been burned."

WHEN TO PLANT SORGHUM.—The Bucyrus (Ohio) *Forum* contains an article from the Rev. A. MYERS of that place, in which he states that the experience of forty persons of his acquaintance demonstrates that early planting is not practicable. "Of all the experiments from the last of April until the 10th of May, not one matured; those from the 10th of May until the 20th were ripe, or nearly so; and all, without exceptions, from the 20th of May until the 1st of June were perfectly matured, demonstrating, conclusively, that the latter part of May is the best time to plant." It is absolutely essential to success in making sugar, he says, that the sorghum should be fully matured, and as early planting is not safe, he thinks we must have some preparation to bring the seed up speedily. What that is, he professes to have discovered, and will announce in time for planting. We hope he will do so.

DRAUGHT HORSES IN THE WEST.—A correspondent of the Minnesota *Farmer and Gardener* urges the farmers in that State to raise more draught horses—not slim-shanked racing horses. Thousands of dollars have been wasted in trying to raise the latter, while substantial draught horses will sell in any market, and will pay.

MANAGEMENT OF HONEY BEES.

APRIL is the month, in this climate, to remove bees confined in buildings, cellars, etc., to their summer stands. Let it be done just as soon as the weather becomes mild, and the ground free from snow.

If it is convenient to set each hive where it stood last season, it is well to do so; but it is not at all necessary, as the bees take a new survey and marking of the positions of their hives after a winter's confinement, and a new position appears to be just as good as an old one. But be careful to set the hives where no change of position will be necessary, till again removed to winter quarters. When cases do occur in which it is necessary to remove hives a few feet, after being placed in position for the season, it should be done by degrees, a few inches at a time. If a hive stands by itself, or five to ten feet from any other hive, it may be removed several feet at once with safety; but when hives are placed in rows, side by side, with about a foot of space between them, as is frequently the case, it would produce great confusion and loss of bees, to move the hives laterally, so as to trench on the original position of each other. In such a case, the bees of the different hives would become badly mixed, and many would be killed in the battle that would ensue. In a few days they would become regulated again, but with greatly diminished numbers.

If I were under the necessity of removing bees in such a case, I should do it by moving the hives a few inches daily, till I gained the desired position.

Hives may be moved *back and front* a foot or two daily, without derangement to the bees; and where no other hives exist in close proximity, they may perhaps be moved ten or fifteen feet at once, and all the bees will find their readily.

When bees are removed from their place of wintering to their stands, the first operation performed by them on their rallying out, is to *mark the position of their hives*. This is done by a series of circular flights, with which all bee keepers, I presume, are familiar. On these occasions the position of the hive is marked with such accuracy, especially the entrance of it, that if removed only six inches, the bees, on their return from the fields laden with pollen or honey, alight exactly where the entrance *was*, not where it *is* on their return. From this circumstance, it is shown that the color, size or shape of the hive has nothing to do with the correct return of the bees to their own tenements. A row of hives may be so alike that no man can discern the least difference between them, and they may stand within a few inches of each other, yet the bees will seldom make a mistake and enter the wrong hive. Even if a white hive be substituted for a black one, or *vice versa*, the bees in the fields while such change is made, would return with the same unerring exactness to their hives as if no such change had taken place.

It appears that the transposition of hives, or their removal to new localities, is not attended with much loss of bees at any time after cold weather sets in, while the bees are confined to their hives by the severity of the weather. Last fall, the last of November, on protecting my bees for the winter, I moved the hives to a new location, mixing them without any regard to their previous position, supposing that cold weather had set in for the season, and that

my bees would not leave their hives again till spring. But unfortunately in a few days after the hives were arranged, and protected with a packing of straw, a warm spell of weather set in, and the bees became uneasy, and began to escape through the straw in such numbers that I was compelled to uncover the hives in front, and allow the bees to sally out. They had previously been confined to their hives by cold weather about ten days, which led me to think that they would mark the positions of their new stands, and a less number of bees would be lost by fighting, in consequence of getting mixed, than would occur, if they had not been thus confined to their hives. In this opinion I was not mistaken. I noticed but very little confusion in the bees by not entering their respective domicils; perhaps a quart of bees were killed only in fifty hives, and after the second day of issuing they had become perfectly "at home," and no further loss was sustained. In this case, the hives were placed as close together as they could be set, and were mostly removed several rods from where they stood during the summer.

The result of this operation is of some interest to bee keepers, as it shows that bees may be removed with safety and the hives placed in any position, without much loss, after cold weather has set in, and the bees have been confined a week or two to their hives by the severity of the atmosphere, even if they sally forth in large numbers as soon as removed.

In this month, the stands or bottom boards of the hives should be cleaned of all the foul accumulations of winter, and the combs examined for the purpose of removing any dead bees between them, which is best done by the feather end of a quill. Mouldy combs should be cut out, and such families as are short of honey should be supplied with honey in the comb, strained honey, or a syrup made of sugar. This should all be done on removing bees from their winter quarters, when they are wintered in a separate location from their summer stands.

The hives should rest closely upon the bottom boards till very warm weather sets in, about June 1st in this climate and earlier in more southern latitudes, when they should be raised *three-eighths* of an inch all round.

The moth worms that occasionally appear in April and May need not create the least alarm in the mind of the inexperienced bee keeper, as these pest are found more or less in all families of bees. They should be destroyed when seen, and a watch kept for their cocoons, in which they wind up as silkworms do, and come forth a winged miller, which is far more dangerous than the original worm.

While I do not advise bee keepers to spend much time in ferreting out the hiding places of moth-worms, it is not amiss to lay split elders, or anything having a hollow groove or cavity on the under side, upon the floor boards of the hive, under which the worms will take refuge, and may thus be easily destroyed. It is also advisable to raise the hives about once a week from April to June, and destroy such worms as may be found under the edges of them.

There is no necessity to place the boxes or caps for surplus honey in their positions till next month; but be sure and get them on early in May, and attach a small piece of empty comb in the corner of each box, which causes

the bees to commence filling the boxes sooner than they would do if no such combs were placed there. Take new combs of last year's make, and cut into pieces about two inches long and one inch or less thick—the lower edges of combs being best. Then melt some beeswax, take a stick with a rag tied to the end, about as large as a walnut, and first lay a coating of hot wax upon the place where the piece of comb is to be cemented, then dip the edge of the comb to come in contact with such coating quickly in the wax, and place it in its position before the wax has time to cool, and it will adhere firmly. You can give direction to the store combs in the caps, by placing these small pieces of comb lengthwise, as you desire the combs to be built.

It is not a difficult matter to attach pieces of comb in boxes that are closed, with no opening except the holes through which the bees pass. In such cases, the pieces of comb should be no larger than will easily pass through the holes, and the placing in position is to be done with the swab, the stick above referred to.

Wilton, N. Y.

T. B. MINER.

ITALIAN BEES.

EDS. GENESEE FARMER:—The February No. of the *Genesee Farmer* contains an article on Italian honey bees from Mr. T. B. MINER, which, it strikes me, is so much at variance with the spirit which characterizes the contents of your valuable journal, so inconsistent, and displaying such ignorance of modern bee literature and physiology, that one would suspect the writer had confined his reading strictly to his own book on the Honey Bee, which, valuable as it is, does not exhaust the subject. As many place deservedly high confidence in Mr. MINER's practical skill, they may be led astray by his statements in the article on the Italian bee.

For the sake of brevity, I will go over the same ground without referring to his statements. Those interested in the subject may, by comparing our statements, judge for themselves which article is best supported by facts, and which is written in the best spirit to advance truth and dispel error.

Families of Italian bees, as well as queens, have been offered for sale, by advertisement, by several parties for more than a year past; but from the extra risk and expense attending transportation of families on long journeys, we do not advise their purchase.

There was never "speculation" or "humbug" in the importation of the Italian bee, either into this country or into different parts of Europe. As early as 1849, a few families of Italian bees were imported into Germany by amateurs. They were kept and bred by scientific men, who had made bee culture the study of their life, and not a business; and they employed this most interesting insect to elucidate some of the most important and interesting truths in the mysteries of bee life. (See the writings of DZIERZON, BORLEPSCH and SIEBOLD.) At DZIERZON's apiary, and aided by him, the learned and renowned SIEBOLD armed himself with facts which made clear the existence of true parthenogenesis in bees by experiments with both the black and Italian honey bee. Whilst DZIERZON was conducting various experiments, which extended over several years, and which could only be

carried on by the presence of the two races together, he and other observers noticed striking differences in favor of the Italian race, and then a natural and legitimate desire arose to obtain them. Since 1849, much has been written about them by highly educated men in Germany, England and France. Mr. LANGSTROTH was, I believe, the first to publish an account of them in this country, and, if I mistake not, it appeared in the first edition of his valuable work, translated by his friend Mr. SAMUEL WAGNER from the *German Bienenzeitung*. Each subsequent edition contains a more minute account of them. Since Mr. LANGSTROTH's first notice, a growing interest has existed in this beautiful and useful insect, which induced several gentlemen to import them; among other attempts, the Patent Office at Washington, which effort, I regret to say, was unsuccessful.

I would here, for the public good, demand of Mr. MINER proof that the workers can, "at best, be only half breeds." This shows that he is either ignorant of the physiology of the bee, as given by the highest modern authorities, or that he discards their views. I never part with a queen until I have seen her progeny, and know them (the progeny) to be full blooded. Owing to the distance queens fly when on their "first excursion," it is necessary, in order to insure a certainty of having a majority of Italian queens purely impregnated, to have command of all the native bees for at least two miles distant. This, of itself, involves considerable trouble and expense, which, together with all the expenses—first cost and importation—is such that it must take several years for an importer to realize from sales at any price his first season's outlay, if ever he does it.

DESCRIPTION, ETC.—This peculiar bee exists only on the southern slopes of the Alps, in Lombardy and Southern Switzerland. I say *only*, for in no other part of the world is this species found as a native. It is marked distinctly with three light yellow bands, and is therefore entirely different in external appearance from the common black bee. It is about one-ninth larger than the black bee, if hatched in cells of its own make. As to its superior qualities, although attested by the highest authority, I may add my own experience. I find them stronger, more hardy, and more laborious than the black bee. In the early morning, before the black bee is to be seen, they are out at work, and in the evening, when all is quiet about the black hive, you will still see the Italian worker returning to her home.

On cloudy mornings and windy days they show more courage; you will then see twice as many Italians active as others. Their strength is superior beyond question, and they will invariably commence to rob the black hive first, if placed in their vicinity; whereas, I have never in my experience seen the black hive attempt to rob an Italian colony.

The reason that this species has only of late years come into renown, is from the fact that the region in which this bee is exclusively found is not much in communication with the other parts of Europe, being very mountainous, and not traversed by general highways, rivers and railroads.

C. W. ROSE.

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DUCKS AND THEIR MANAGEMENT.

C. N. BEMENT, an acknowledged authority on poultry matters, writes:

Any calculation as to the return to be expected by those who keep ducks turns entirely on the possession of a suitable locality. They are most likely to be kept with profit, when access is allowed them to an adjoining marsh or water meadow, where



MALLARD OR WILD DUCK.

they are able in a great measure to provide for themselves; for if wholly dependent on the breeder for their living, they have such ravenous, insatiable appetites, that they would soon, to use an emphatic phrase, "eat their heads off." No description of poultry, in fact, will devour so much or feed so grossly.

But certain moderate limits are necessary for their excursions, for otherwise they will gradually learn to absent themselves altogether, and acquire semi-wild habits, so that when they are required to be put up for feeding, or immediate sale, they are found wanting. Ducks, too early allowed their liberty on large pieces of water, are exposed to so many enemies, both by land and water, that few reach maturity; and even if some are thus fortunate, they are ever after indisposed to return to the discipline and regular habits of the farm-yard. They may be kept in health in small enclosures, by a good system of management, though we fear not with profit—which is the point to which all our advice must tend.

A drake and two or three ducks will cost but little to maintain, and will do incalculable and unknown service by the destruction of slugs, snails, worms, and the larvae of gnats and other annoying insects. The only trouble they will give, is, that if there be much extent of water or shrubbery about their home, they will lay and set abroad, unless they are got up every night and confined, which should always be done; otherwise they will drop their eggs carelessly here and there, or incubate in places where their eggs will be sucked by carrion crows or skunks, and half their progeny destroyed by weazels or rats. In the neighborhood of large pieces of water, or wide-spreading marshes, this will be either impossible or attended with more waste of time than the ducks are worth.

Ducks are much more prolific than they have credit for, and, even for eggs, can be made a profitable bird, if well fed and properly managed. Any common duck so treated, if not old, will yield in a season one hundred or more large, rich, delicious eggs. When they lay, it is daily or nightly, and if kept from setting (which is easily done by chang-

ing their nests frequently), they will lay with little interruption from March until August. But the trouble is, a duck lays only when eggs are most abundant, while hens' eggs may be procured at all seasons.

A single drake is sufficient for six to eight ducks. If well fed in winter, and lodged in a comfortable, dry place, they begin to lay the latter part of March or first of April. They must then be closely looked after, for they are very careless and deposit their eggs wherever they happen to be—in the water, in the shady and secluded places, even after having concealed them from the person who has charge of them; they hatch them secretly, and some fine morning bring their young brood to the house to ask for food without requiring further trouble. It is prudent, when the spring is at hand, to give them food three or four times a day, but little at a time, but always in places where it is wished they should lay, and in placing their nests where they once have lain.

Where they are kept in considerable numbers, they should have accommodations of their own. The duck-house must be secure at night against prowling animals, such as foxes, skunks, weazels and minks. The walls and roof should be low and thickly thatched with straw, for warmth in winter, with the necessary openness for ventilation, and ingress and egress of the ducks. The construction of a piece of rustic work like the above figure (which we take from "Brown's Poultry-Yard"), after selecting the situation, can easily be made by any person accustomed to the use of the saw and the ax. All that is required is a little taste, having your plan well digested before commencing, so as to require no alterations. Join four pieces of saplings in an oblong shape for the sills; confine them at the ground, erect at the middle of the two ends a forked or crocheted post, of suitable height, in order to make the sides quite steep; join these with a ridge-pole; rough-board it from the apex downward by the sills to the ground;



A DUCK HOUSE.

then cover it with bark, roughly cut in pieces a foot square, laid on and confined in the same manner as ordinary shingles; fix the back end in the same way, and the front can be latticed with small poles with the bark on, arranged diamond fashion, as shown in the sketch—a part to be made with hinges for a door.

Something like this, placed on a bank, or small

island of a lake, pond, or small stream, and half covered with vines or shrubbery, would make a very pretty home for aquatic birds. The size of the building may vary according to the wants of the owner. Laying and setting boxes may be placed at either or both sides of the building, under the roofing, on the ground.

They should have a place separate from other fowls, on account of the great difference in their habits. When circumstances will permit the arrangement, we recommend having the house adjoining the pond, which should be enclosed. The laying ducks should have plenty of room for the sake of cleanliness, and should never share the habitation of geese, as the ducks are liable to persecution. When accustomed to be fed in the house, they readily present themselves at the proper time; in the morning they get their feed apart from the geese and fowls—in which case they are not persecuted by the former, nor pilfered by the latter; and thus, too, their eggs are secured with far greater certainty, since the birds are not released from their enclosure till after the hour which usually witnesses the deposit of their eggs. The duck generally lays at night or early in the morning, and is usually disposed to lay away from her house; but by our plan many eggs are secured which otherwise would have probably been lost.

A strong desire for the selection of her own nest is generally found to influence the duck; but this is mainly the case as the time draws near for incubation. Wood is seldom secure against rats, and does not so well suit the cleansing process of water and the lime brush, and few places require their application more frequently.

Do not crowd your birds, and always arrange for good ventilation. When the flock is large, separate the young ones, that they may thus have the advantage of better food, and that no risk may be incurred of finding the eggs of the older ones trodden under foot and broken, at your morning's visit. On this account, the laying ducks should always have plenty of room, and be kept by themselves.

REARING AND FEEDING THE YOUNG.

The best mode of rearing ducklings depends very much upon the situation in which they are hatched. On hatching, there is no necessity of taking away any of the brood, unless some accident should happen; and having hatched, let the duck retain her young upon the nest her own time. On her moving with her brood, prepare a coop and pen upon the short grass, if the weather be fine, or under shelter, if otherwise; a wide and shallow dish of water, often to be removed, near by them. Their first food should be crumbs of bread moistened with milk; curds, or eggs boiled hard and chopped fine, are also much relished by, and are good for them. After a few days, Indian meal boiled and mixed with milk, and if boiled potatoes, and a few cives or lettuce chopped fine be added, all the better. All kinds of sopped food, buckwheat flour, barley meal and water mixed thin, worms, etc., suit them. As soon as they have gained a little strength, a good deal of pot-herbs may be given them, raw, chopped fine, and mixed with a little bran soaked in water, barley and boiled potatoes beat up together. They are extremely fond of angle-worms, grubs, and bugs of all kinds, and for

which reasons they may be useful to have a run in the garden daily. All these equally agree with young ducks, which devour the different substances they meet with, and show, from their most tender age, a voracity which they always retain. No people are more successful in rearing ducks than cottagers, who keep them for the first period of their existence in pens two or three yards square, feeding them night and morning with egg and flour, till they are judged old enough to be turned out with their mother to forage in the field.

It is necessary, to prevent accidents, to take care that the ducklings come regularly home every evening; and precautions must be taken, before they are permitted to mingle with the old ducks, lest the latter should ill-treat and kill them,—though ducks are by no means so pugnacious and jealous of new-comers, as common fowls uniformly are.

FARMING NOW AND THEN.

WHEN this deponent came to little Seneca in 1821, all the good farming here was confined to growing the largest fields of wheat of the best quality from the then virgin soil. The man who then sold the most wheat from his farm was called the best farmer; he, of course, grew a large patch of rye to feed with the cut straw to his heavy German plow horses; but his corn field was then small, always neglected, and very weedy, so that he rarely harvested more than corn enough to fat pork for his family. Farmers who then harvested 600 or more bushels of wheat, rarely ever kept more than two or three cows, and poor ones at that—only a few rough sheep to make the wool for the linsey woolsey and fulled cloth of the family. But all that is changed now—thanks to the advent of the wheat midge for jostling the farmer out of the old track of depending on the wheat crop as the only paying product of the farm! Being thus driven by a mysterious insect from continuing to grow wheat after wheat, to a more general and varied system of husbandry, grass and clover growing, and stock raising has enabled the farmer to grow large crops of Indian corn, oats, potatoes, etc., with a manure pile continually increasing, and also extra rich in plant-food; so that at this time, as the midge leaves us, the wheat crop is again very profitably included in the judicious rotation of the farm.

During the late long continued good sleighing, in driving along the western shore of the Cayuga, I was delighted to see the great improvements that have been made in the last thirty years. In every farm yard we passed, instead of a few straw-fed cows and pot-bellied yearlings, and a leaky log shed, as of old, we now see the ample yard enclosed on two sides with deep shingle-roofed sheds, which now shelter well-conditioned bovines of improved breed, and fine-woolled sheep, all up to their knees in straw, but not straw-fed. The extra large, painted, and blind-ventilated barn is full of well-cured fodder and grain; and the tall stacks of dark-looking, but early, well-cured clover hay near by, gives an earnest that the farmer knows how to feed his soil, as well as his stock.

If the farm house does not bring to mind the chaste specimen of Grecian or Gothic architecture,

and its surroundings are somewhat crude or deficient in sylvan or floral decoration, you feel assured that there is both comfort and plenty within, and that all its inmates are ever happily exempt from that conflict between pride and poverty, which is so often the plague of the domestic circle, except in rural life on the well managed farm.

Waterloo, N. Y.

S. W.

CARROTS AND OTHER ROOT CROPS.

EDS. GENESEE FARMER:—In the *Farmer* for March, "O. R." writes urging the value of the carrot, and the importance of its culture, valuing the carrot above other roots, while admitting the high value of turnips, etc., and giving good, sensible directions for the cultivation. The cause he advocates is a most worthy one. The farmers of all parts of the country would surely profit largely by growing more roots—profit in several ways—in economy, in the health of their stock, and in the increased value of manure, while insuring clean tillage, because a good root crop (potatoes excepted) cannot be grown without. But I fear that he is too eager an advocate, and incline to think that "roots" have been pronounced a "humburg" by many who have undertaken to grow them after reading just such promises as to their yield and value, and that all who sow carrots with the idea of getting 1,200 to 1,500 bushels per acre, three bushels equal in feeding value to one of corn, will be disappointed.

First, as to the yield. Nine years trial give me 600 bushels as a good average crop, with clean, careful *field* culture, plenty of manure, a good sandy loam, the crop taking its place in the regular rotation—much larger crops, on land devoted specially to this crop, and tilled like a garden, with a foot of good loose soil, and manured every year abundantly—in one case, 400 bushels from a quarter acre; but I never found another piece of land on my farm that would do it. It is, however, to be noted that the carrot can be grown for many years on the same land if manured, with a constantly increasing yield.

Second, as to feeding value. BOUSSINGAULT makes the nutritive value of 382 lbs. of carrots, or say $6\frac{1}{2}$ bushels of 60 lbs. = 676 of Swedes, or say $11\frac{1}{2}$ bushels = 70 lbs. of Indian corn = 100 lbs. of hay—a result, I think, no farmer will acquiesce in. FRESNIUS, 542 lbs., say 9 bushels of carrots = 100 lbs. of hay = 391 lbs. of mangold. The average of seven experiments in Germany makes 250 lbs. of carrots = 346 of mangold = 100 of hay; and four of the same set of experiments average the result that 262 $\frac{1}{2}$ lbs. of Swedes are of the same value,* the other experimenters not having included this root in their lists. Let us be cautious in deciding where doctors disagree, so much as they do on this question. For myself, I think two quarts of corn meal, or four of ground oats, a higher daily allowance for a cow than a half bushel of carrots or turnips, and that 8 bush. of carrots are no more than equal to one of corn or two of oats. On the other hand, the roots are more wholesome, and have a health-giving value that can not be over estimated.

Third, as to the comparative value of carrots and other roots. For young horse stock, I consider a few carrots a necessary almost. For cattle, bushel for bushel, I would as lief have Swedes; but, of course, this is only my insignificant opinion.

Fourth; although I would never be without a few carrots, I prefer either the Swedes or the mangolds, because I can grow these roots in my regular rotation, whereas carrots require rather a petted piece of ground; because the culture of the other roots is easy, while the carrots, owing to their puny growth at first, are difficult to till and easily injured; besides, they are so slow of germination that the weeds are apt to get the start of them; because I can be as sure of 750 to 800 bushels of Swedes as 600 of carrots, or even 500, and can use green manure. As to the fly, a little superphosphate, or well prepared fine bone dust compost, makes the turnip crop safe, and pays in the next crop.

Lastly; let us have lots of roots; but if a man wants 1,200 bushels of carrots, he had best plant two acres, and take good care of them. R. Q.

CULTIVATION OF POTATOES.

ONE would suppose that at this late day, it would be difficult to say any thing in regard to potato culture that is new or worth reading. Well, it is so in a great degree, yet we do not appear to know any more in regard to the best methods of culture than people did fifty years ago. It was a prominent question then as now, "*Are small potatoes as good for seed as large ones?*" We are also undecided, as we were in "old times," whether it is best to plant in *hills* or *drills*, or furrows, as is done in many places. But farmers are quite as eager to learn how to cultivate this crop, as they would be, apparently, if it were a new vegetable just introduced to the rural public. One says, "I'm utterly discouraged with potato culture; I frequently get but little more than the seed I planted, and half rotten at that." Another remarks, "I generally have dug my potatoes late in the season, and have had a great many diseased ones; but this year I dug early, and lost nearly the entire crop;" while a third exclaims, "I dug early, and seldom lost any by disease; but I was induced to leave my crop in the ground last fall till the middle of October, and when I went to dig 'em, they were all gone, except a few not worth the expense of digging."

Now, what are we to do under such a state of disagreement and uncertainty? I think I can lay down a few brief rules, that can safely be followed by all persons engaged in the pursuit of agriculture.

First, plant fair, medium sized potatoes, and plant *early*, just as soon as the ground can be properly prepared. Plant in *hills* or *drills*, but the furrow system, placing the seed about ten inches apart, a half or whole potato, with manure, when used, *coarse*, and *over* the seed, will generally give a greater yield per acre, than when planted in hills. In both cases the manure should be top of the potatoes.

Second, let the furrows or hills be deep, so that the seed will lie full six inches below the surface of the soil. I find that potatoes rot less when deep in the soil, than when near the surface, yet this

* *Cultivator* for July, 1861. Table taken from FLINT on Dairy Farming.

may not always be the case; but *six inches* is the established depth of those who have experimented on potato culture in Europe with the best success.

Third, dig in October; no matter what you have heard or read, the great preponderance of testimony goes to show that late digging is the best. There are, undoubtedly, cases in which the reverse of this seems to be true, but the practice of growers of this crop, since it became diseased, goes to show that digging in *September* is bad policy generally.

T. B. MINER.

REMOVING MANURE FROM STABLES.

EDS. GENESEE FARMER:—A correspondent in your paper, not long since, said, "Put plenty of straw in the stables for bedding, and then put extra sideboards on your wheelbarrow to remove the manure from the stables." Now, I think the first advice very good; where straw is plenty, put it in the stables to the horse's belly; but, then, a wheelbarrow, even with sideboards, is of little account where there are three or four large stables to clean out. We use a sled, made by putting together two boards or planks about ten inches broad and some six feet long. We simply bore about five quarter holes in each plank. The first holes are to put the breast chains through, to haul it by—so that we need no swingle-tree. In the other holes we put cross bars, about six inches shorter than the breadth of our door; then by putting a short rope or chain to the rear of the sled, we draw it backwards into the stable, put on a load as much as a horse can well draw, drive to where you wish it to lie, throw it off and drive back for another load, putting the manure from the horse stable where that from the cow stables was last put, so that it may become mixed, which is a very important item in managing the manure heap. Or, which is still speedier and easier, get a horse hook, made out of inch square iron prongs, fourteen inches long, handle two feet long, with a ring in the end to hook your spread in, and having three prongs one foot apart, made by welding the three prongs together near the end where the ring is. You may have a ring on the top of the middle prong, to lift it out when you wish to unload. When you wish to load, drive it in with a wooden maul or mallet; then start your horse, and you will be astonished at the speed with which you can clean a large stable, where you use straw enough to make the manure adhere together.

H. S. KINDIG.

Westmoreland Co., Pa.

THOUGHTS ON READING THE JANUARY NO. OF THE GENESEE FARMER.—It is pleasant to read the results of scientific experiments, and particularly in regard to growing grass, in which department there have been so few reliable and exact results recorded in this country. Ashes, and even coal ashes, are good fertilizers, and as shown by your figures to be nearly equal to the more costly articles, and brings to my mind that for two years past I have burned coal, and having thrown the ashes the first winter around a pear tree, during the summer the red clover came up and grew luxuriantly where for years there was none, or very little, to be seen. I saw no improvement in the pears.

The article on soluble food struck my fancy as being valuable; and if practiced to considerable ex-

tent, we should see fewer horses stiffened by founder.

The subject of tight barns might, with profit, be discussed by our agricultural clubs throughout the country, and I think it an open subject, and as the old barns are rapidly giving place to new, now is the time.

The subject of churning is well treated, but the cows, which give or make occasion for the use of the churn, and the science of churning at all necessary, are not even mentioned, or how they should be treated. The winter fare of the cow influences the use of the churn to a great extent.

—D., Gates.

CHAFFING HAY AND CORN STALKS ECONOMY.

A GREAT deal of *pro* and *con* has of late been published on the economy of chaffing corn stalks and hay as food for bovines and horses. The veteran JOHN JOHNSTON says he has tried it, and the increase did not pay the matting; and for the same reason he never grows a patch of roots for the delectation of his milk cows in winter. But what is fair economy for Mr. JOHNSTON on his large and very productive farm, should not be practiced by the small farmer who is at less expense for labor, and is necessarily obliged to make the most of every vegetable product.

In the *March Farmer*, we read of a Connecticut farmer who has brought up a worn out farm to keep thirty head of bovines, that would keep only six or eight head before. He not only chaffed his well saved stalks, but he steamed them also, with meal, oil cake, bran, etc.; soiling his cattle in summer, by which means he was enabled to make 750 loads of composted manure yearly. This not only manured his corn, but top-dressed his meadows.

But there is an advantage gained to the wheat-growing farmer in the fineness of the manure from cut feed. JOSEPH WRIGHT of Waterloo had a field of 20 acres of the fairest white wheat grown the past season in this country; while all other crops were short from freezing, his was saved by a liberal coat of fine manure from cut stalks, which formed a mulch for the wheat, thus performing the office of the leaves and vegetable humus of a new clearing.

At almost all the large livery stables in New England and New York, the hay and stalks fed to horses is chaffed fine and treated with ground corn, oats, etc., by which a great saving is made in hay, which in all large towns is much dearer than grain in proportion to its nutriment. It is said to have been fully ascertained by repeated experiments in England, that nineteen pounds of cut hay will take the place of twenty-five pounds in the long state.

A pains-taking correspondent of the *Country Gentleman* writes that at all the omnibus and railroad stables in New York, the hay is cut fine and mixed wet with corn and oats ground, in the proportion by measure of three measures of corn to two measures of oats, the proportion varying only with the market price of the grain. The proportion fed of cut hay to grain is generally nine pounds of hay to seventeen of grain, averaging ten quarts of meal a day to the largest horses. At the Sixth Avenue stables, where the horses do not average over 1,000 lbs. each, 6½ lbs. of hay and 15½ lbs. of meal keeps them in fine order.

s. w.



GEESE.

OUR esteemed correspondent, C. N. BEMENT, writes as follows in regard to geese:

Of all the domestic birds, none are so profitable as geese, where there are facilities for keeping them; for there are none that can do so much for themselves when alive, and none that come to so little waste when dead. Unlike the fowl, all parts of the goose are equally good. Besides which, every feather is of value, greater than that of every other of our domestic birds. Every housewife knows how to appreciate beds made of their feathers; and in these days of steel pens, the goose still possesses quills. When young, the goose is a popular dish on the table, and most esteemed by the epicure. How is it, then, that the goose is not more popular with the farmers? It can only be accounted for by the fact—for fact it is—that it is not in every one's power to keep them.

The chief requisites for keeping geese, are a pond of water and a pasture for grazing. The latter is essential, as the bird is gaminiverous as well as graniverous. An occasional cabbage leaf will form an acceptable variety of food, and during the winter any spare vegetables will help to supply the deficiency of the pasture. If fed high, some varieties of geese will often lay in autumn, but the advantage of a brood of goslings in November is questionable.

In allowing geese to range at large, it is requisite to be aware that they are very destructive to all garden and farm crops, as well as to young trees, and must, therefore, be carefully excluded from orchards and cultivated fields. It is usual to prevent them getting through the gaps or holes in fences by hanging a stick or yoke across their breasts.

They are accused by some of poisoning the grass, and of rendering the spots where they feed offensive to other grazing stock; but the secret of this is very simple. A horse bites closer than an ox, a sheep goes nearer to the ground than a horse; but after the sharpest shearing by sheep, the goose will polish up the turf, and grow fat upon the remnants of others. Consequently, where geese are kept in great numbers upon a small area, little will be left to maintain any other grass-eating creature. But if the commons are not short, it will not be found that other grazing animals will object to feeding either together with, or immediately after a flock of geese.

It has already been said that geese are much given to grazing, but we have not said that they

improve the pasture. This, however, is the case, although there is an old proverb to the effect that nothing *will* eat after a goose—whereas the auxiliary verb should be *can*, and not *will*. The fact is, the goose will thrive on a pasture so short that a goat would starve on it; and the consequence is a short, sweet herbage.

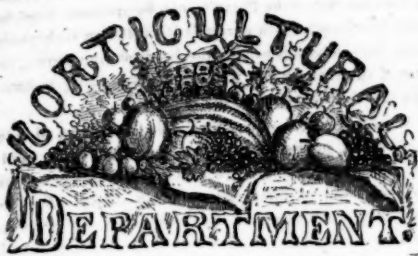
Although water is the natural element of geese, yet it is a curious fact that they feed much faster in situations remote from rivers or ponds. They should not be allowed to run at large when they are fattening, as they do not acquire flesh nearly so fast when allowed to take much exercise. It is stated that geese can be raised, in a proper situation, at a profit far greater than almost any other stock. But to do this, more attention is required than is usually bestowed on their keeping and management. Like other fowls, they may be brought by proper management to a great degree of fatness; but the period at which they are the fattest must be chosen to kill them, otherwise they will rapidly become lean again, and many of them would die.

Geese may be fattened at two different periods of their lives—in the young state, when they are termed "green geese," and when they have attained their full growth. The methods at each period are very nearly the same. A goose diet, for the first two weeks, is formed of oats and water mixed in a trough; after this, the food is gradually changed to barley meal mixed with water, of the same crumbling consistence that has been recommended for the goslings, the water being given separately in small quantities. Steamed potatoes, mashed up with four quarts of buckwheat or oats, ground, to the bushel, and given warm, is an excellent diet, and will render geese, cooped in a dark place, fat enough in three weeks.

HABITATION.

In selecting a situation for a goose-house, all damp must be avoided; for geese, however much they may like to swim in water, are fond at all times of a clean, dry place to sleep in. It is not good to keep geese with other poultry; for when confined in the poultry yard they become very quarrelsome, and harass and injure the other fowls; therefore it is best to erect low sheds, with nests partitioned off, of suitable size to accommodate them; and there should never be over eight under one roof. The larger ones generally beat the smaller, in which case they should of course be separated, one from the other, by partitions extending out some distance from the nests. The nests for hatching should be made of fine straw, of a circular shape, and so arranged that the eggs can not fall out when the goose turns them. From fifteen to seventeen eggs will be as many as a large goose can conveniently cover.

In the event of any one being induced by our account to keep geese, let us recommend him not to begin with young birds. They are not to be depended upon for breeding till the third year, and do not attain their perfection for a year or two subsequent to that age. When once in their prime they never retrograde, so that, barring accidents, a person possessed of a gander and three or four geese (no way related to each other, and in their prime of life,) may consider himself set up in the *anserine* for life.



GRAPE GROWING AND NATIVE GRAPES.

THE continued and accelerating progress which is made in this branch of horticulture, and the increasing interest with which it is regarded, no less than facts of suitability of soil and climate for the production of fine grapes and the inexhaustible demand for the fruit and its products, lead us unmistakably to the conclusion, that the particular attention which it now attracts is not a "mania" or "fever," but a healthy and well directed interest in the development of one of the most valuable branches of our varied agriculture.

The limit which shall define this pursuit, it is at this time impossible to determine; for if we should attempt to trace the channels that it would take in a country whose resources are developing as fast as our own, and where population is constantly opening new avenues of trade, only imagination could enable us to perceive, even in part, the ultimate position it should occupy as an element of wealth and commerce.

Those who have thought but little of this subject will yet ask what remuneration there is in this employment. To answer this question to the satisfaction of each of our readers, scattered as they are over a vast tract of country a thousand and more miles in breadth and length, it would be necessary to take into consideration the peculiar circumstances of each location.

We do not mean to say that this pursuit can be engaged in indiscriminately by every cultivator. On the other hand, it is absolutely necessary for the highest success that many favorable conditions shall be complied with.

Particular varieties of soil are quite essential to the production of good fruit—and the quality of this fruit is probably affected more than any other by the variety of the soil where it is produced. It is said, with how much truth, however, we are unable to say, that wine connoisseurs in the wine-growing districts of France and Germany can tell with great precision, from the particular qualities of wines, at what elevation the fruit was grown. A very light sand and a heavy clay soil are equally to be avoided for a vineyard. What is commonly known as a limestone gravelly loam, consisting of some sand, some gravel, some clay and a good proportion of vegetable mold, overlaying a limestone formation may be considered the most favorable soil for the health, the longevity and the productiveness of the vines.

Although the southern exposure of a hill or hillock is usually preferred for the vineyard, and no doubt such localities produce superior vines, yet what is known famil-

iarly as rolling land is quite suitable if the soil is right, and a larger amount of fruit can be obtained from such situations than from hillsides. We should carefully avoid a swale or flat piece of ground, for such localities are particularly liable to early frosts and to mildew.

Proximity and remoteness of markets and facilities of transportation are considerations of no small account to one thinking of engaging in grape growing, and should be duly weighed before commencing such an enterprise. Where, however, it is the intention to manufacture the whole crop into wine, less attention need be paid to these matters.

Climate, of course, is a subject of primary importance, and in any locality should this prove adverse, all other favorable conditions are unavailable.

A soil that is too retentive may be underdrained; or if too light, may have clay added to it; or if too heavy, sand; or if the site be too much exposed to bleak winds, it may be sheltered; but if the climate is naturally unpropitious, no human agency can ameliorate it to any considerable extent.

This subject of climate, therefore, must enter largely into the calculations of profit and loss; but we do not consider the extent of country favored with such a climate to be in any way yet determined. In fact the recent introduction of new varieties of grapes, which has done so much to fix the attention of fruit growers in the more northerly States, upon this subject, has proved the limit to shift with the discovery or origination of earlier ripening varieties.

Four thousand acres of vines about Cincinnati, and numerous vineyards throughout the whole length of the Ohio valley and Missouri, tell stronger than words can tell that in those localities grape culture is a success.

But what about it further north? Shall we have the same or similar results in some of the Eastern States, in New Jersey, Pennsylvania, New York, Northern Ohio, Southern Michigan, most of the Western States, and even in some parts of Canada? Wherever, in any of these States, the experiment has been tried, we have so uniformly heard of success that the idea of collecting statistics on the subject has scarcely occurred to us. Wherever in any of these localities, the enterprise has been properly undertaken and executed, the most gratifying results have followed; and this, too, with the varieties Isabella and Catawba, which, with our present knowledge, we consider quite unsuited for the purpose.

To enable our readers to form some definite idea upon this subject, it is with pleasure that we are enabled to copy from the last number of the *Horticulturist* the following facts which bear directly on this subject:

H. W. MURFELD, Esq., of Newburgh, Orange Co., N. Y., has a vineyard, the vines of which were planted at different periods. First lot planted, 100 vines, have borne four crops; second lot planted, 150 vines, have borne one crop. These 250 vines are all that I will speak of in connection with this vineyard, as the others are younger. These vines, it was thought, did not occupy one half acre, but to make calculation safe, it was considered as half an acre. Product the past year, 3,700 lbs.; brought 14 cents per lb.; variety, Catawba. When these vines get old enough to bear a full crop, they will produce as many more pounds. The ground on which the first vines were planted was not trenched. He now trenches as he plants. Mr. MURFELD says they have ripened fully each year.

Mr. CHARLES WOOLEY, of New Paltz Landing, Ulster Co., N. Y., last year produced from three-fourths of an acre, four tons of the most beautiful grapes I ever saw. I think I hazard nothing in saying that his clusters averaged half a pound each. They brought 10 cents per lb. Varieties, Catawba and Isabella. The earth was not trenched. Mr. WOOLEY never fails to ripen his grapes.

S. B. TROWBRIDGE, Esq., a retired gentleman of Poughkeepsie, who cultivates the vine more particularly for the pleasure it affords, produced last year at the rate of \$1,024 per acre. This gentleman gave me a very interesting statement of his mode of cultivation.

Mr. BRUYN, of Esopus, Ulster Co., and ISAAC MERRITT, of Hart's Village, Dutchess Co., both last year produced results equal to any of the above; so I am informed by their neighbors, but not having seen them and their grounds, can not speak as of facts.

Messrs. J. HEATON and W. KNIFFIN, my neighbors, have equalled any case I have named. Mr. HEATON's vineyard covers several acres.

No one acre of the above cost over \$200—cost of vines, preparation and planting.

We have no doubt that most of the vineyards in Central and Western New York would show similar results, and we trust that at an early day we may be enabled, by the action of our Fruit Growers' Society, to lay before our readers a large collection of facts on this subject.

As it is our sole purpose at this time to note the direction of the public mind in relation to the matter of grape growing, and not to enter into the practical details of the subject, we shall only offer, for the advantage of those intending to plant the present season, a few remarks on the value and comparative merits of the best and most reliable sorts of grapes.

The Isabella in our latitude, and the Catawba further south, until within the last year or two have been almost the only varieties of vineyard culture, but henceforth there will be a greater diversity, and, we have no doubt, a much superior quality of crops.

The Delaware grape now holds so high a place in public favor, and is so widely known, as to be scarcely entitled to the distinction "new," which alone gives *eclat* to many varieties, and we are happy to state that this sort has progressed so far as to be firmly established in our best societies' lists of fruits for "general cultivation." Vineyards of it are beginning to be planted, and the most gratifying results to be realized. Mr. A. J. CAYWOOD, who collected the facts we have quoted from the *Horticulturist*, says in the same article: "I think the Delaware and Concord will far excel the Isabella and Catawba for vineyard purposes. The American Pomological Society places it on its list for general cultivation, and the same may be said of the various Fruit Growers' and Horticultural Societies throughout the country. At the meeting of the Farmers' Club of New York, May 7th, 1860, Mr. A. S. FULLER, in making some remarks on grapes and wines, said that "while trying some wines a few weeks since, at the residence of J. G. SCHWEIK, of Cincinnati, who has experimented with as many varieties of native grapes as any other man in this country, he made some statements which may be as interesting to others as they were to us. In naming six of the best varieties of vine-grapes in the latitude of Cincinnati, he placed the Delaware first and said the Delaware wine was the richest, and preserved the real bouquet of the grape, and it improved by age. The vintage of 1859 contained 8½ per cent. of alcohol. Even in South Carolina and Georgia, the Delaware is ranked

first by the most experienced grape growers; and if such is the case where the Catawba can be produced in perfection, how much more surely is it entitled to such preference here, where it proves the hardiest vine grown, and one of the very earliest to ripen its fruit, being at least a full month in advance of the Isabella.

We could go on adducing reliable statements, all to the same effect, in regard to the value of this variety, until a volume was filled, but we deem it unnecessary in the present state of information on the subject. We have said thus much to assure our readers that this grape has lost none of the favor with which it was first regarded, by the repeated and various trials to which it has since been subjected.

The following brief description will suffice to distinguish it by those to whom it is not familiar: Berries small, round; skin thin, of a beautiful amber color; flesh juicy, very little pulp; flavor sweet, sprightly and delicious; bunches medium size, very compact and sometimes shouldered. A good, free grower and one of the hardiest vines known.

In our memorandum book of last year we find the following at the date of Sept. 9: Delaware ripening well, a few bunches quite colored, all more or less. Sept. 19. A great part of the fruit already used.

Diana. This variety, in quality, ranks only inferior to Delaware. As we have never before given an engraving of it, we now present one. Its berries and bunches are larger than the Delaware, and it is also a stronger grower—equalling, we think, the Isabella, in this respect. It ranks very high in the estimation of practical fruit growers, and like the Delaware, is placed by the American Pomological Society on its list for general cultivation. In the severe winter of 1860-61, this variety in this vicinity, with the Isabella and Catawba, was badly injured by the cold, and we have no reason to suppose it any hardier than them. The Delaware, Concord and To Kalon were the only ones among some forty varieties that were able to stand this test of Arctic cold. It would be unfair, therefore, to place much against the Diana on this account.

Dr. MINER, of Honeoye Falls, in this county, who has had most experience with this variety, regards it very highly, and as a most profitable sort for extensive culture.

NICHOLAS LONGWORTH, the great grape grower and wine maker of Cincinnati, says: "The Diana I deem superior as a table grape to the Catawba."

In reference to the Diana as a wine grape, Mr. SCHNEIK, whose remarks in relation to the Delaware we quoted, said, in connection therewith, that with the Diana he had but little experience, but from the wine he had made from it he was inclined to place it next to the Delaware.

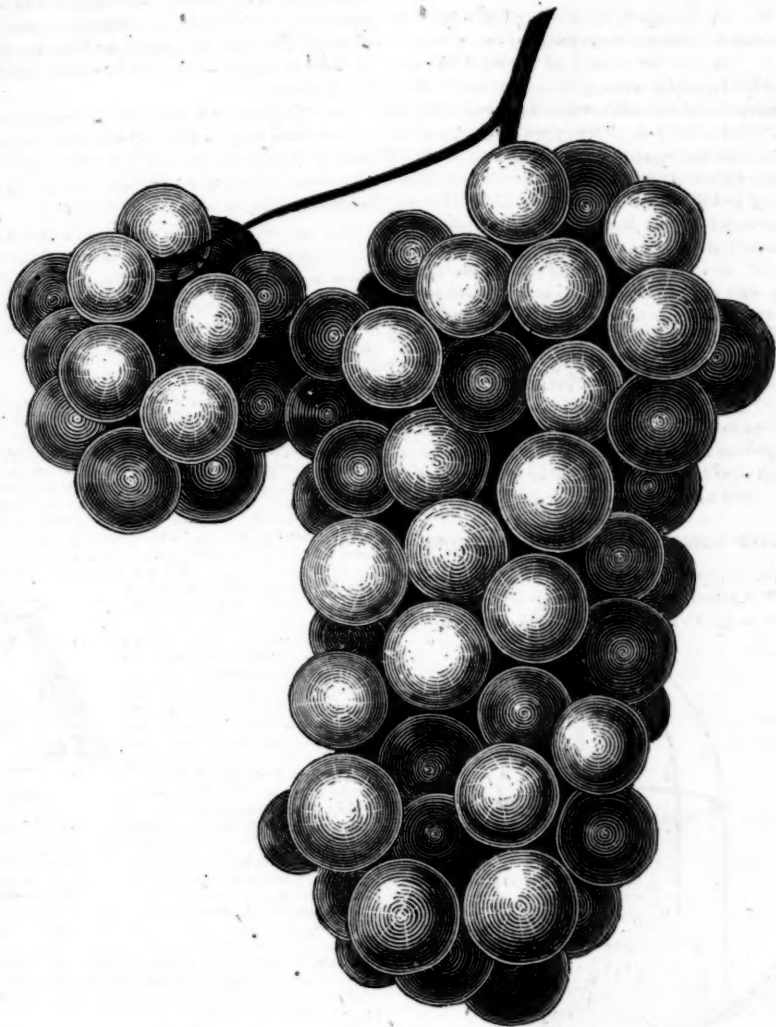
The bunches of the Diana are large and compact; berries large, amber colored, round, abounding with a rich, vinous and aromatic juice; ripens in this vicinity from one to two weeks before Isabella. Our memorandum of Sept 9 says: Diana commencing to color.

Concord. This variety, from its hardness, fine appearance, vigorous growth, productiveness and early ripening, must become extensively planted. Berries large, round; thick bloom, dark color; bunch, in size

and form similar to Isabella, and the fruit ripens two weeks earlier.

Crivelin. When more shall be known of this variety, we think it will rank high among the new sorts. Where it originated, in Pennsylvania, it has superseded the Isabella, as it is better in quality, and ripens two or three

Hartford Prolific. This variety resembles Isabella in many respects, but is much earlier in ripening, and on this account will become a favorite. Memorandum, Sept. 9, reads: Hartford Prolific ripening finely, many bunches being fit to cut; and Sept. 13: Hartford Prolific and Delaware have many bunches fit to cut.



THE DIANA GRAPE.

weeks earlier than that sort. In general appearance, it closely resembles the Isabella. Flesh melting, juicy and sweet. Our memorandum of Sept. 19 reads thus: Crivelin, well colored and sweet—fit to eat. Isabella, in open ground away from buildings is just commencing to color, in fact, this may be said only of here and there a bunch, the great mass yet remaining green. But by the sides of houses and in very favorable and sheltered situations, there are many bunches well colored, but not uniform, nor have they yet attained any sweetness.

Rebecca. One of the most beautiful and delicious of all the native grapes, but will undoubtedly require more than usual care. It can not be too highly recommended for a garden variety. It is a white or yellowish white grape; berries medium size; obovate; very juicy, melting, and free from pulp; flavor rich, sugary, vinous, brisk and luscious; skin thin, greenish white, and covered with a thin, white bloom; bunches medium size, without shoulders. Ripens about two weeks earlier than Isabella.

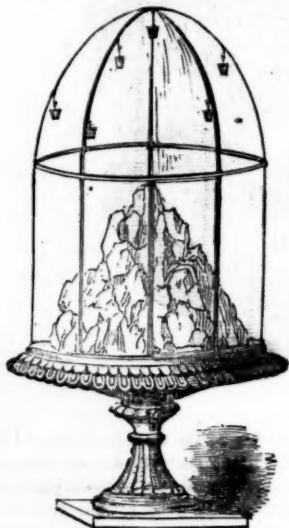
Blood's Black. A sort of which as yet we know but little, but are impressed in its favor. In size and quality it compares with the Isabella. Memorandum, Aug. 27th, says: Blood's Black nearly covered with red. Sept. 4th: Blood's Black fully ripe. Sept. 9th: Blood's Black all eaten by the birds.

Ontario. Not enough is yet known of this noble appearing fruit to enable us to say much positively in reference to it. We had the pleasure of tasting it last summer, but it was grown under glass. We should not, we think, be warranted to ascribe to it in the open air the fine quality it then presented. It was show fully ripe at the State Fair held last year at Watertown, Sept. 17-21. It is a fruit of great promise; bunches very large, double the size of Isabella; berries large, black; skin thin, covered with a rich bloom; flesh with very little pulp, juicy, aromatic and vinous.

Perkins. A variety but little known. Although not equal to some other in quality, it is so hardy and so very prolific that it bids fair to be a sort which will be considerably planted. At the meeting of the Fruit Growers' Society of Western New York, Oct. 1, 1861, Mr. Townsend said that he had "seen the Perkins on Mr. Hoag's (of Lockport) grounds, and had never seen a vine so immensely loaded. It is of fair quality—as good as Isabella and better than Hartford Prolific, though only second rate as compared with Delaware." The time of ripening of the Perkins varies but little from that of Hartford Prolific.

GLASS CASES FOR PARLOR GARDENING.

The use of glass cases in rooms for growing certain varieties of plants, is becoming deservedly popular, and we hope to see this taste wide spread throughout our



GLASS CASE FOR PARLOR PLANTS.

country. No object can be introduced into the parlor more ornamental, or which will afford so constant and lasting a pleasure. Especially with a people inhabiting a latitude where we are confined to our houses the greater

portion of the time for several months in the year, should this branch of horticulture be carried to its highest limit.

The cases employed for this purpose may be very simple, consisting only of a wooden pedestal, which the wood turner can make, somewhat similar in form to the one represented in the annexed engraving, and a simple glass case, such as are sold by the crockery and glassware merchants. The glass case ought not to be less than a foot or fourteen inches in diameter, and the pedestal made to fit it closely.

The upper surface of the pedestal should be turned out or hollowed, so as to leave a basin from half an inch to an inch in depth, which should be closely lined with zinc to prevent the water from being absorbed by the wood, which of course would soon destroy it.

The engraving we here give is of a case much larger than that of which we are now speaking, and suitable to grow a greater variety of plants and those of a larger size than could be employed in the small case. The cut and the description of it which we here give are taken from the *Journal of Horticulture* (English.) The writer of the article says:

I should prefer a stand similar to that represented in the engraving; it should have a diameter of three feet, but less would of course suffice, in cases where that may be thought too large. The glass case should be made to fit exactly to the inside of the stand, and should have the framework formed of stout brass bars, well secured to a strong rim of zinc round the bottom. A department on each side should be made to open, care being taken that these openings are made as nearly air-tight as may be, and a few hooks should be securely fastened to the bars in the upper part of the dome, by which to suspend small

plants in pots. The stand should be filled nearly to a level of the rim with broken pot-sherds or sandstone, or any rubbly porous material. Over this should be laid a small stratum of sand, to make a very level surface. In the centre, on this level surface, place a four sided cone of zinc, about 16 inches in height, with a saucer at the top, and having some strong pieces, of about 2 inches square, well fastened to and projecting from the sides. Next commence around the base of the cone, and place angular pieces of sandstone of about five or six lbs. weight each, and pile up thus completely over the cone. The projecting pieces will assist in retaining the stones in position; and a most important point to be observed is, that every stone must be laid perfectly firm from bottom to top, as the plants will not flourish on a movable stone. This may be insured by the use of a little cement as the operation proceeds; but I have also made use of small flexible wire, passed several times round the mass, for the same purpose. The interstices between the stones may be filled with some nice fibry loam, sandy, soft, and unctuous to the touch.



As it will be difficult for most people who may wish to construct these cases to procure glass curved so as to form the top as it is represented in the engraving, we would suggest that the case be made polygonal in form and the top pyramidal, and then plane glass can be used for every part. A case with a diameter of three feet would require, to be in good proportion, a height of from four to six feet. Such a structure, with its furnishing, would of course be quite heavy, and care should be taken that the bottom be constructed of good solid material. A set of strong castors will enable it to be moved from spot to spot as convenience may require.

The plants suitable for a small case are, on account of its size, of course, comparatively few. The best of these are *Lycopodium denticulatum* (fig. 1), a green, moss-like,



Fig. 1.

Adiantum is a very beautiful trailing variety.

Tradescantia Zebrina, variegated-leaved spider-web.—

A pretty, trailing, variegated-leaved plant.

Linaria cimbalaria, Kenilworth ivy.—A little trailing plant; leaves smooth, cordate, fine lobed.

Lysimachia nummularia moneywort.—This is a pretty, delicate, little, green, trailing plant, with opposite, roundish, cordate leaves, bearing a small, yellow blossom.

Cissus discolor.—A most beautifully variegated leaved, twining plant.

From the varieties of native ferns, we have selected the following, on account of their small size and their beauty, as most suitable for a very small case:

Polypodium vulgare (fig. 2).—Frond or leaf deeply pinnatifid, smooth; nearly a foot high and divided into segments nearly to the midvein.



Fig. 2.

Polypodium Dryopteris (fig. 3).—A very beautiful slender variety, nearly a foot high; frond consisting of two light green, compound, drooping leaflets, of a very delicate texture; root black and very slender; grows in shady places and mountainous woods—comparatively rare.



Fig. 3.

Asplenium Trichomanes.—Frond pinnate; lance linear in outline, from three to six inches high, with eight to twelve pairs of small, roundish-ovate leaflets; stipe or stem black and polished. A small and delicate fern.

Ophioglossum vulgatum, Adder's tongue, (fig. 4).—A curious little fern growing in low grounds; fronds solitary, two to three inches long, and two-thirds as wide. The little, green, narrow-pointed leaves, seated on a narrow stalk or neck, and peeping up from among the grass, may not be unaptly compared to a snake's tongue.



Fig. 4.

Asplenium Montanum.—Frond smooth, bi-pinnate, narrowly oblong, lanceolate in outline; grows in tufts four to eight inches high on mountain rocks.

Adiantum pedatum (Maidenhair fern).—This is the most beautiful of all our native ferns, abounding in deep,

rocky woods. Stipe eight to fourteen inches high, slender, of a deep, glossy purple, approaching a jet black. At the top it divides equally into compound branches, each of which gives off, at regular intervals, six to eight pinnate leaflets from the outer side, giving the whole frond the form of the crescent.

In a larger case, a much greater variety of plants may be introduced—especially of ferns, the most beautiful of all plants for this purpose, and to which particular attention should be directed.

But little thought or care has yet been bestowed in this country, to growing collections of ferns, and of course it is at present impossible to obtain here many of the fine exotic varieties of this graceful plant; but, as our own forests furnish us with a great number of the most beautiful and highly prized sorts, no one need be debarred the privilege of cultivating them, since it only requires the trouble or pleasure of collecting them from sources easy of access to nearly every one of our readers.

Besides the plants mentioned and described above, we here specify a few others suitable for a large case:

Sarracenia purpurea, Side-saddle flower, (fig. 5).—A native plant familiar to many of us. Grows in wet meadows and about mud lakes. Leaves six to nine inches long, evergreen, composed of a hollow, pitcher-form petiole, swelling in the middle, with a wing-like appendage, extending the whole length inside, from half an inch to an inch wide, and extended on the outside of the mouth into a lamina covered with reversed hairs. Their capacity, when of ordinary size, is about that of a wine glass, and they are generally full of water. It bears a single, large, purple, nodding flower, almost as curious in structure as the leaves.



Fig. 5.

Saxifraga Sarmetosa, Beefsteak geranium, (fig. 6). A plant of Chinese origin, common in most green-houses. Leaves variegated, roundish, toothed, very hairy. Throws out runners which strike root like the strawberry.

Calla Ethiopica, African lily, (fig. 7).—This familiar plant is well adapted for a large case. Its dark green foliage, of peculiar form, has a luxuriant tropical appearance, and the large, show-white flowers would be ornaments of great beauty.

Vinca varietata major.—A new variety of periwinkle, with variegated leaves. Like the other periwinkles, it is a trailing plant. Foliage very large, and beautifully margined, striped and blotched with silver.



Fig. 7.

Nepenthes distillatoria, Pitcher plant, (fig. 8).—This is the famous pitcher-plant of China and the East Indies,



Fig. 8.

which bears leaves, the extremities of which are hollowed out into cup-like appendages, which are generally filled with water, which seems as if confined within them by a lid, by which they are surmounted. This plant probably requires more heat to keep it in good health than most of the others here mentioned, and should, therefore, be used only where a pretty warm temperature is kept up, say from 70° to 80°.

Dionæ Muscipula, Venus' fly-trap, (fig. 9).—This is a native of the Southern States. It is a singular plant in respect to its leaves, which are of an anomalous form, and have a singular motion by which they catch insects. LONDON says: "LINNÆUS affirms that when the entrapped insect ceases to struggle and is quiet, the leaf opens and permits it to escape." This does not agree with ELLIS' account, for he affirms that the lobes never open again so long as the animal continues there. He thinks it probable that a sweet liquor discharged by the red glands tempts the insect to its destruction. He adds that if a straw or pin be introduced between the lobes, they will grasp it as fast as if it were an insect. A friend of ours who has had considerable experience in growing this plant has informed us that when an insect is caught in a leaf, it remains closed until the structure of the insect is destroyed by decay, and he considers that the plant draws nourishment from this source.



Fig. 9.

Goodyera discolor.—An herbaceous plant, with fleshy, chocolate-colored, ovate leaves.

Of native ferns, in addition to those already noticed, we will add, for a larger collection:

Aspidium cristatum, Crested shield fern.—Fronde twelve to eighteen inches high, pale green; remarkable for its broad, ovate-lanceolate outline. Grows in moist woods, in New England and the Middle States—rather rare.



Fig. 10.

Aspidium Lancastricense, Lancaster shield fern.—A beautiful fern, quite distinct from the preceding, twenty-four to thirty inches high. Frond dark green, from fifteen to eighteen inches long and five to eight inches in width; narrowly lanceolate.

Aspidium tenue, Brittle shield fern.—A delicate fern, on moist rocks—frequent. Fronds six to twelve inches in height, dark green; its divisions rather remote, and with subdivisions considerably variable in form.

Apleurium Filix-femina (fig. 10).—A delicate, finely divided fern, found in moist woods. Fronds from one to two feet high, with sub-opposite divisions. These are subdivided into distinct obtuse segments, which are themselves cut into oblong, deep serratures, and lastly, the serratures are mostly with two or three teeth at the summit, the whole producing a very graceful and pleasing effect.



Fig. 11.

Osmunda regalis, Royal flowering fern, (fig. 11).—Almost too large for a case, for which, however, small plants may be used. It is a large and beautiful fern, found in swamps and meadows. The fronds are three or four feet high, smooth in all their parts, lance-leaved in outline. Leaflets, or pinnae opposite, remote, each with six or nine pairs of leaves, with an odd one.

"HOW MUCH SEED SHALL I REQUIRE FOR MY GARDEN?"

THIS is a question often asked, but which can not be answered definitely unless all the circumstances are known. The general rule is to buy enough to ensure a crop; in other words, take the advice of the seedsman, who alone knows how far his seed will go! The London *Gardener's Chronicle* has an article on the subject from which we make a few extracts:

The uncertainty in the quality of seeds may be owing in part, and in some cases (as with onions) almost wholly, to their having been produced in a bad climate, the husks alone being formed, without the presence of a living germ within. Another cause is the destruction of the vital principle in consequence of seeds having been stored before they were dried, the inevitable effect of which is the loss or fatal weakening of germinating power. In some instances an eager gardener gathers them before they are ripe, as is much the case with those flower "seeds" which are not seeds at all, but seed vessels, such as China Asters and other composite flowers, or esculent Umbellifers like carrots; these may be fair to the eye, although but emptiness within. And there is the dead remainder of a seed drawer invigorated by the addition of a fresh young crop.

These causes, to say nothing of others, are more or less in continual operation, and seedsmen themselves can by no means always guard themselves against being deceived by appearances. But it is evident that unless seeds are uniformly alike in quality, there can be no certain rule by which to determine the quantity to be sown. You can not deal with living as with dead matter. In the affairs of mankind, it by no means follows that two and two practically make four; life sets arithmetic at naught. In like manner a pound of cabbage seed is not like a pound of shot, although the two are a good deal alike. A pound of shot will always produce the very same effect under equal circumstances. But a pound of cabbage seed will do no such thing; not one-half—not more than a quarter—will take effect, so that two pounds or even four pounds may be required to do the work of one pound.

Were it otherwise, all seedsowing might be reduced to absolute rules, and tables like the following, for which we are obliged to a correspondent, would be the best advisers of gardeners.

| | | | | |
|--------------------|--------------------|--------------|-----------|----------------|
| Turnip contains in | $\frac{1}{2}$ oz., | 7,754 seeds; | in 1 lb., | 248,128 seeds. |
| Beet | " " | " 485 " | " " | 15,520 " |
| Cabbage | " " | " 4,498 " | " " | 148,776 " |
| Onion | " " | " 1,838 " | " " | 120,572 " |
| Radish | " " | " 1,950 " | " " | 31,200 " |

In the same manner the quantities of seed in a lb. weight might be stated. The number of plants required to fill an acre of ground is as follows:

| | |
|----------------------|-----------|
| At 1 inch apart..... | 6,272,640 |
| " 2 " | 1,568,160 |
| " 3 " | 696,960 |
| " 4 " | 392,040 |
| " 5 " | 250,905 |
| " 6 " | 174,240 |

Therefore, 1 lb. of turnip seed, if every seed would grow, would be sufficient for nearly an acre and a half of land; yet seedsmen recommend $4\frac{1}{2}$ lbs. to be used for that space.

It may be alleged that those who sell seeds are interested in leading their customers to purchase as much as possible, and that no inference can be properly drawn from such a case as that just mentioned. Supposing it to be so, and making every degree of allowance for that feeling, it still remains evident that the quantity of seed required for a given space can not be determined by fixed rules; but that so many adverse influences are in action as to render minute calculations worthless, and to compel submission to a large amount of waste. In the case just quoted, it is assumed by the seedsman that only about two seeds in thirteen will come to anything—a very large loss it must be confessed. Matters being in this state, theoretical quantities can only mislead.

In order to judge what is the real germinating power of a sample of seed, it is the practice among the principal seedsmen to have "trial books," in which they record the percentage of seed which grows under the following circumstances. A hundred seeds are sown in a garden pot filled with fine, light soil; the pot is placed in a gentle hotbed, and as soon as the young plants have fully appeared they are counted. If the seed is wholly good, the return is 100; if good only in part, it may be any lower number—we will say 50. In that case, as only half grows, it will require two lbs. to do the work of one. This is a very old practice, and seems at first sight to be unexceptionable; nevertheless it is far from being so good as it looks. It is well known that in earth constantly warm and damp, seeds having very feeble vital power will grow satisfactorily, and soon gain vigor from the surrounding atmosphere; but in cold soil they lie and perish. Now all our hardy seeds are committed to the ground at that time of the year when even at midday its temperature is not above 45°, and when at night the thermometer may fall to 32°. Under such conditions, which are wholly unlike those of the "trial" pots, the same result can not be expected. If indeed our open gardens were like Miss Maline's plant-cases, and as carefully looked after, very weakly seeds would come up; but as the circumstances are entirely different both as to temperature and skill, that lady's success would be no evidence of what would happen in the open air.

Nevertheless we believe the trial system to be by far the

best that seedsmen can employ, and if it deceives them it is because it can not be otherwise, in the nature of things.

We all know how loud and ceaseless are the cries of gardeners as well as amateurs that the flower seeds they purchase will not grow. It never seems to occur to the complainants that they themselves are the executioners and the seeds their victims. And yet we are perfectly certain, from nearly half a century's experience, that such is the case. Seeds of a plant inhabiting a dry country with little winter's cold and a genial, early, steady spring, are sown here in the open border in March or April; there they lie in most uncongenial soil, exposed to wet and cold. But the force of life is strong within them, Nature will have its way, germination begins some bright sunny day, after which comes an ice cold dew at night, and the young embryo is rendered torpid. Nevertheless, weakened as it is, the succeeding day sees a renewed effort at growth—followed by renewed torpidity. The same alternation of paralysis and revival goes on for a little while, till at last the powers of nature are exhausted and the seed expires. Now, these early efforts are out of sight; no eye watches the struggle, the seeds die while buried—and the seedsman is abused. Mignonette often affords a striking example of this. Although a native of the hot sandy regions of Northern Africa, where it is a little woody bush, it nevertheless is able to ripen its seeds in our northern latitude. But when the time for sowing them arrives in spring they are cast carelessly upon the cold ground, and there they perish. Then come complaints—"Mr. Flowerdew," exclaims the gentle Lucy Bell, who is devoted to flowers, and who has been looking forward to the delights of a charming bed of Mignonette, which will not come, "it is very tiresome indeed, that your seed never will grow—it is really quite shameful;" and then she sees in the pits a great quantity of beautiful pots of the plant, 4 or 5 inches high, standing as close as quills on a hedgehog. "Why look there, I declare you have sold me bad old seed, and kept the good yourself!" "Madam, I assure you that I have but one sort of seed, of which you have had a part." "Well! it is most extraordinary." At last the gentle damsel buys as many pots as she requires, but at the same time remains perfectly convinced that she was cheated in her seed. Should this meet her eye it is to be hoped that she will be more charitable in future, and blame herself for having destroyed the lives she had thought to cherish.

Depend upon it, ladies, the blame of your ill success in getting up your seeds lies at no other door than your own. Sow them when the weather has become warm; cover them at night with a screen, or constantly with a thin coating of nice, neat straw, such as the market gardeners raise their spring radishes under, and you will incur no further disappointment. Or, if you have them, hand glasses will do as well.

A COMMON MISTAKE IN RAISING BULBS.—All bulbs feel extremely any dryness after their growth has once set in earnest. It is quite discouraging to have tulips and crocuses going out of bloom too fast. When this is the case, it will be often found, on examining the soil, that it is too dry, for the quantity of water absorbed and transpired by bulbs is something quite astonishing, and a good watering will often renew the blooms—give them, as it were, a new lease of life.

Ladies' Department.

ORIGINAL DOMESTIC RECEIPTS.

Contributed to the Genesee Farmer.

A BOILED PUDDING.—Remove the crust from a loaf of bread, put it in a cloth tied tightly, and boil it an hour; then serve with a nice warm sauce. This is very cheap and a very good pudding.

A VERY NICE PUDDING.—A loaf of cake made with soda, rather plain, steamed thoroughly, and eaten with a warm sauce made of wine or cider, is very good. If the butter and sugar are thoroughly mixed by long stirring before the wine or cider is added, it will look creamy, and greatly improve the taste of the sauce.

INDIAN BREAD.—Take two quarts of sifted meal, pour on boiling water enough to make the meal quite moist. When cool, add a quart of wheat flour, half a pint of risings, two-thirds of a tea-cup of molasses, and a little salt. Mix well together, put into large basins and let it rise. When light, bake in oven one hour, and then steam two hours over a pot of boiling water.

HOW TO TRY LARD.—The trying of lard is an important branch of economy, requiring a little care and some direct information. Water, be it remembered, should never be made use of in this process, since it cooks the fat and makes it soft, and causes it to become speedily rancid. Put a lump of fat into a pot, and let a little of the fat try out over a moderate fire; after which, put the fat over the fire, with such precautions that there is no danger of the lard scorching, and no need of water. The lard, when fully cold, will be found quite firm and solid, which can not be the case if water is made use of in trying out.

RENNET.—It is now decided by the best judges that the calf should be taken from the cow sixteen or eighteen hours before killing it. When the rennet is taken out, pick out the straws if there be any, and fill it with salt. Never wash it in the least, inside or out. Place a layer of salt on the bottom of a large stone jar, then put in the rennet that has been filled with salt; add another layer of salt, and so on until the jar is filled. Be sure and have so much salt that there will be no brine. Cover it tight, and set it in a cool place. When wanted for use, make a strong brine, throw in a few sprigs of sage, and put in the rennet—one, two, or half a dozen, according to the number of cows in the dairy. They should be put to soak two or three days before needed for use. When soaked a day or so, they should be turned wrong side out and thoroughly rubbed. One gallon of brine is sufficient for two rennets. A teacup two-thirds full, where two rennets have been soaked, should bring one milking of thirty cows. But be sure and use rennet enough to bring the milk the first time; better have a little too much than not enough. If you get in a little too much, and it is sweet, it will not hurt the cheese in the least, as it will work off in the whey. Never use sweet whey to soak rennet, for it has a tendency to sour the curd. Never use a drop of rennet but what is perfectly sweet. The best vessel to

soak rennet in is a stone jar, set in a cool place and covered tight. When the liquor is used off, more brine should be added, but a greater quantity will be needed to bring the cheese. One very important fact should always be remembered, and that is to have the rennets in soak well salted.

BOILING VEGETABLES AND MEATS.—In boiling vegetables, they should not be put into the water until it is fully heated, and then there should be no cessation of heat until the cooking is done. But when meats are to be boiled, quite an opposite procedure is to be observed. They require to be put into the water while it is cold; or, in the case of fowls, while the water is a little warm—and then, instead of rapid boiling, the water should be merely simmered. By this process, the meat is made tender, while by fierce boiling it is hardened and made tough. Potatoes should be put into boiling water and boiled as quick as possible—not over twenty minutes. Even heavy potatoes will become mealy boiled in this way.

[So writes an experienced housekeeper. We think, however, that in the case of boiling meat, it is better to put the meat into boiling water, and let it remain for a few minutes to harden the outside. Then pour in a little cold water and keep the water below the boiling point till the meat is done. This will keep all the goodness in the meat, and it will be tender. If put in cold water, it will make good soup, but the meat will not be so good.]

AMERICAN WOMEN.—A German writer, J. G. Kohl, has undertaken to describe American women. The picture is not a flattering one. As to good looks, he thinks the great majority of American women are moderately pretty, but "their charms are concentrated more in their features than in their demeanor, figures, or corporeal shape." He thinks the reverence for women in America has pampered and spoiled them. They do not make good help-meets. He pities the poor husbands. "If a lovely American girl sinks into the arms of a man, to be bound to him for life, she does so much in the same way as she throws herself into her easy-chair. Marriage is her pillow, her sofa, on which she intends henceforth comfortably to repose. Upon it she confidently throws all the burden of her cares and troubles; she regards her husband as her factotum, who has to provide for all her wants. He must procure her a house according to her fancy; he must furnish this house exactly as she wishes it; he must arrange and administer kitchen and cellar, and even go every morning before breakfast to make the necessary purchases for the day's meals."

"Even farmers' wives often hold themselves much too high for business of this sort, and scenes of the following nature may be seen at market: A young farmer's wife I once saw sitting in a little one-horse chaise and holding the reins. In her elegant dress she could not, of course, be expected to go into the dust and confusion of the market, so she had sent off her husband. He was busy among the stalls, like a swallow collecting insects for its young, and presently appeared again laden with all sorts of boxes and parcels. These the farmer's wife, naturally, could not take on her silk lap, so the husband had to hold them carefully in the chaise."

Miscellaneous.

SMALL POTATOES.—Some years ago, a gentleman visiting a farmer at Tallond, Conn., took from his pocket a small potato which somehow had got in there at home. It was thrown out with a smile, and the farmer took it in his hand to look at it. A little boy of twelve at his elbow asked what it was. "O, nothing but a potato, my boy; take and plant it, and you shall have all you can raise from it till you are of age." The lad took it, and the farmer thought no more about it at that time. The boy, however, not despising small potatoes, carefully divided it into as many pieces as he could find eyes, and put them in the ground. The product was carefully put aside in the fall, and seed for several hills was obtained for the next spring. The product was all kept for seed, until the fourth year, the yield being good, the actual product was four hundred bushels. The farmer, seeing the prospect that by another year the potato field would cover his whole farm, asked to be released from his promise.

With the same calculation, prudence and industry, how many who are disposed to regard the trifling things upon which fortunes are built, as too "small potatoes" to receive their attention, would have been in independent circumstances if they had husbanded their small advantages! Small potatoes should not be despised, even though they be at first "few in a hill."

OVER-PRAYED HIMSELF.—During the prevalence of the cholera in Virginia, the negroes on the different plantations became dreadfully alarmed, and thought they would certainly die with it. Among others, in one of the upper counties, was a negro boy who, having heard his father say that the cholera would soon be along that way, left his work one day and betook himself to the woods. Here he was found by his overseer soon after, fast asleep. Being taken to task by him for leaving his work, he excused himself on the ground that, not being "prepared to die," he had gone to the woods "to meditate." "But," said the overseer, "how was it that you went to sleep?" "Well, I don't know, massa, how dat was 'zactly," responded the negro; "but I speck I must have *over-prayed myself!*"

A SALUTARY THOUGHT.—When I was a young man, there lived in our neighborhood a farmer who was usually reported to be a very liberal man, and uncommonly upright in his dealings. When he had any of the produce of his farm to dispose of, he made it an invariable rule to give good measure—rather more than could be required of him. One of his friends, observing him frequently doing so, questioned him why he did it—told him he gave too much, and said it would not be to his advantage. Now mark the answer of this excellent man. "God Almighty has permitted me but one journey through the world, and when gone I can not return to rectify mistakes." Think of this. But *one journey* through the world!

REMEMBER always that if you would be loved, you must be amiable.

PURCHASING A HUSBAND.—Susan, a country girl desirous of matrimony, received from her mistress a present of a five pound bank note for her marriage portion. Her mistress wished to see the object of Susan's favor, and a very diminutive fellow, swarthy as a Moor, and ugly as an ape, made his appearance.

"Ah, Susan," said the mistress, "what a strange choice you have made."

"La, madam," said Susan, "in such hard times as these when about all the tall fellows are gone for soldiers, what more of a man could you expect for a five pound note?"

LOVE OF THE BEAUTIFUL.—A farmer was one day visiting the owner of a beautiful country-seat in Brooklyn, and walking with him through the little grove, out of which all the underbrush had been cleaned, paths had been nicely cut and gravelled, and the rocks covered with woodbine, suddenly stopped, lifted up his hands, and exclaimed: "This I like; this is Nature with her hair combed!"

A SCORN STROKE.—"Ah! John, you won't have me much longer. I shall never leave this bed alive." "Please thee-self, Betty, and thee'll please me," returned John, with great equanimity. "I have been a good wife to you, John," persisted the dying woman. "*Middlin'*, Betty, *middlin'*," responded the matter-of-fact husband.

A FAST MAN.—A journalist has discovered that, all things considered, railways are very slow, and behind the age. He says that, when traveling, he blushes to think that the message over the telegraph flies like lightning, while he is lazily creeping at only thirty or forty miles an hour.

A YOUNG IRISHMAN who had married when he was about nineteen years old, complained of the difficulties to which his early marriage had subjected him, and said he would not marry so young again, if he lived to be as old as Methuselah.

THE LATEST.—A gentleman rode up to a public house in the country, and asked, "Who is the master of this house?" "I am, sir," replied the landlord; "my wife has been dead about three weeks."

"THERE is no duty, there is no pleasure, there is no sentiment, which does not borrow from enthusiasm a charm which is still in perfect unison with the simple beauty of truth."

A GOOD WIFE.—A preacher, in a funeral sermon on a lady, after summing up all her good qualities, added, "that she always reached her husband his hat without muttering."

LOVE'S WONDERS.—One year of love would do more toward setting us mutually right when in the wrong, than an eternity of wrangling.

To be pleased with one's self is the surest way of offending everybody else.

WOMAN.—A down East Yankee very cutely says: "Though the men hold the reins, the women tell them which way to drive."



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NOT TOO LATE TO SUBSCRIBE.—As we stereotype the *Genesee Farmer*, the back numbers can always be supplied. All who subscribe now will receive the three first numbers, together with the remaining numbers of the year, and will thus have the volume complete.

We continue our offer of Premiums to all who send subscribers. The books and seeds are sent by return mail, and the grape vines, etc., will be sent in good season for planting.

A better opportunity to secure valuable seeds, plants, etc., was never offered. There is not one of our readers that can not get at least two of their neighbors to sub-

scribe for the *Farmer*, and thus secure a package containing six papers of the choicest imported flower seeds. What lady can not get four of her friends to take the paper, and thus receive by return mail sixteen papers of the choicest flower seeds to adorn her garden? Who that wants a Delaware grape vine, can not procure for subscribers for the cheapest and best agricultural and horticultural paper published?

Will not all our friends oblige us by availing themselves of these extraordinary offers? *Now is the time.*

NOTES ON THE WEATHER FROM FEBRUARY 14TH, TO MARCH 16TH, 1862.—February had a quite uniform temperature, not very low or very high for this month. The average of the last half was 24.7°, or 2.5° below the mean for 25 years; and the average of the month was 24.7°, or 1.0° below that of the month for those years. The coldest was 4° on the 25th, and the mean of the day was 15.0°; the next warmer was 5° on the 15th, which was the coldest day of the month, 12.3°, and the 16th only one degree higher. Still, the heat of February, 1861, was 3° or 4 degrees higher than this.

The hottest noon was 49° on the 23d, and on the next day was the great storm of the month. It began from the E. or S. E., on the coast of North Carolina, was strong at Washington, and extended as a N. E. storm to Maine, pouring down rain, and then snow at New York, Boston, Portsmouth, and northwards on the coast. The wind at Washington was S., and rain began at 10½ A. M., and about 11 the wind changed to a tornado from N. of W., and the steeple of a church fell before it. The storm, less severe, continued into the night. The barometer was at 30.44 inches before the storm on the 21st, fell to 29.35 inches as the rain began, and had risen on the next day to 30.41 at 11 A. M. At New York the wind changed, and blew violently at 3 P. M. from the west. At Rochester, N. Y., at 2 P. M., the change from the west; at Barnstable, Mass., the change was at 8 P. M.; at Belfast, Me., the change from the west was at 9 P. M.; and at Quebec the gale and storm was severe at 11 P. M., changed then to N. of W., and continued to 2 A. M. of the 25th. At evening, a thunder storm extended from Maine along the coast to Long Island sound, and to some extent into the interior. Here, the thermometer fell all the 24th to 4° on the next morning, the lowest in the month. The storm was very violent, as well as very rapid in its motion northwards, and the telegraph line was strongly affected all along the coast. In Western Massachusetts the violent W. wind came on about 7 P. M., and the cold fell below zero.

The water fallen was 2.82 inches. The sleighing was fine all the month, as well as on the last half of January—six weeks of good sleighing in 44 successive days. The month was fine for the operations of business. A great quantity of snow has fallen over the eastern part of this State and over New England. March began with cool, pleasant weather, and the fine sleighing was not materially affected by the rain of the 3d. On the 8th and 9th, the snow melted under the warmth, and the rain of the 10th, and its temperature at noon of 46°, perished the sleighing for the present. The fields, however, abound in snow. The Genesee began to rise, and on the 12th at 11 A. M., the ice of the Genesee

moved off under high pressure of deep water. On the 14th at eve some rain from the S. E., and a great rain followed through the night of the 15th, and to the very close of that day. If the storm should be as great at the south, and other parts of the State, a high flood is to be feared. We wait for the news. West of Rochester, in Orleans and Niagara Counties, the rain of the 15th froze as it fell, loading the limbs of shrubs and trees with ice more than an inch thick, and breaking down the limbs, to the great injury of fruit trees.

The average heat of this half is 30.6°, only half a degree above the mean for 25 years. The first day was the coldest, 18°, and its average, 20.7°; the greatest heat was 46° on the 10th, and its mean, 41.3°. The season has been favorable to our fruit trees.

Maple sugar appeared in the market in the first week perhaps of the month, and is now dear, though no dearer than the first new sugar of last year.

The demand for apples, and consequent high price of ten to twelve shillings a bushel, has brought out a considerable quantity from the stores, laid up for use at such a price.

The Markets.

OFFICE OF THE GENESEE FARMER. }
ROCHESTER, N. Y., March 25, 1862. }

The most noteworthy transactions since last report are the great fluctuations in the price of pork. In New York, Feb. 6, medium, corn fed, dressed hogs sold for \$4.25@4.50 per 100 lbs.; Feb. 13 \$4.57½@4.5; March 6, \$5.75@36; March 13, \$5@5.25; March 20, \$4.75@35. From the middle to the end of February, the pork market was greatly excited. The Union victories, and the prospects of the opening of the Southern market at no very distant day, caused a great speculative demand, and prices advanced greatly all over the country. Orders were sent West, we are told, to "buy at any price." The first week of March, however, the excitement began to subside. It was ascertained that the hog crop of the West was much larger than previous years, and the disposition to speculate was less rife. The next week, the demand was confined principally to the local trade, and prices receded fully \$1 per bbl. on mess pork, and dressed hogs are but a little higher than they were six weeks or two months ago.

We have no doubt that pork will advance—but it may not be for several months. It is now below the producing point, and will, like everything else, sooner or later find its level. We would advise our readers to hold on to what they have—but not to speculate.

The price of beef cattle in New York is about the same as last month, say first quality, 8½@9c per lb. estimated dressed weight; medium, 7½@8½c; poor quality, 6½@7c. The market has an upward tendency.

Good mutton sheep have advanced since last month. They are held at 4½@6c per lb., 11½c weight. Last week, 1,067 sold at Browning's at an average of \$3.54 each. Pelts sell at \$1.75 with an upward tendency.

Working oxen are in better demand. Prices range from \$90 to \$125 per pair for medium, and \$130@140 for large, active, well broken cattle. Milch cows are in excess of the demand, especially poor ones. Some sold as low as \$20@25 each, while a few extra good milkers with calf brought \$50@55.

First class veal lambs are worth 6c per lb. The market is overstocked with "bobs," and the price is low—as it ought to be. Many sell at \$1@1.50 each!

Railroad and omnibus horses sell in New York at \$110@115 each. 322 head of horses for the Rhode Island troops brought an average of \$100 each. They were quite inferior. Some heavy draft horses were sold last week at \$300@325 for first class, and \$150@175 for second class.

GRAIN MARKET.—There is little or no change in the price of wheat since last month. In fact, prices have changed very little since the first of January. The tendency of the market is downward. Corn is lower in New York. We quote Western mixed 56@60c. Eye is lower—80@82c. Oats are also lower—38@40c. Barley has advanced. It is quoted at 81c@81 per bushel in New York.

THE INJURY TO PEACH TREES BY THE LATE STORM.—Since the paragraph on the next page was written, we learn that in the western part of this County, and in Orleans and Niagara Counties, considerable damage has been done by the ice breaking off the limbs of trees. We are told that whole orchards have been stripped, and even forest trees have been very roughly "pruned." The injury is undoubtedly much more serious than we at first supposed. In Canada, too, much damage has been sustained from the same cause. J. W. SNELL, of Rainham Centre, C. W., writes, under date of March 18th: "The amount of ice collected on the trees during the great rain of last Saturday surpasses anything in the recollection of the 'oldest inhabitant.' Every little twig of the size of a straw is covered with ice fully an inch thick, and then icicles from four to six inches long hanging from the limbs. Many of the younger and more tender sorts of trees are broken down. Our fruit trees being most of apples, which are strong, have stood the test pretty well, but peach trees, where they exist, have gone down."

In this immediate vicinity, little or no damage has been done. Everything is favorable for a good crop of fruit as yet. The weather is cool, and this keeps the buds from starting, and there is now no danger as long as they remain dormant.

THE RURAL ANNUAL AND HORTICULTURAL DIRECTORY FOR 1862.—We have now a new supply of the *Rural Annual* for this year. It will be sent to any address, by return mail, for 25 cents.

The *Rural Annual* has been published seven years. The seven numbers, 1856, '57, '58, '59, '60, '61 and '62 will be sent, prepaid, by return mail, for \$1.40, or 20 cents each. No farmer or fruit grower should be without them.

PREMIUMS EXTRAORDINARY.—We continue our offer of books, seeds, grape vines, fruit trees, etc., to all who procure subscribers for the *Genesee Farmer*. See last page of this number.

Inquiries and Answers.

CHEESE VAT.—(JOHN CRAIG.) ROE'S Western Reserve Cheese Vat is one of the best we have ever seen. We think it is manufactured in this State, but do not know the address of the manufacturers, or the price. We saw it at the State Fair at Watertown last fall, and were much pleased with its simplicity, convenience, etc.

APPLES AND APPLE TREES.—(J. C. BURNHAE, *Seymour East, C. W.*) We are unable to identify the apple which succeeds so well with you, from your brief description. If a specimen or two could be sent us, we should probably be able to give its name.

Of what varieties are the trees which do not succeed with you?

PRUNING-NEGLECTED VINES.—(J. G., *Kingsville, C. W.*) When vines have been left until the sap begins to flow, it is best not to use the knife at that time on the old wood, but to wait until the young shoots have pushed a little, when the buds not wanted to grow can be rubbed off and the redundant wood removed. In this way there will be no loss of sap.

RECORD.—In the August No. of the *Farmer*, Geo. E. BRACKETT, of Belfast, Maine, gave a "Register" of the time of blossoming of shrubs and trees, and the appearance of migratory birds, etc., for the spring of 1881. He gives his location as 44.23° N. latitude, and 69.8° W. longitude. For the sake of comparison, I give a similar "Register" for the same spring. My location is 42.28° N. latitude, 77.58° W. longitude. Altitude, about 1,800 feet above tide, which will about compensate for the difference in latitude.

RECORD FOR THE APPEARANCE OF BIRDS, ETC.

Robin and blue bird appeared February 28.
 Sparrow (ground sparrow)—March 2.
 Phebe bird—March 29.
 Barking frogs and striped snake—April 6.
 Golden winged woodpecker (yellow hammer)—April 15.
 Virginia nightingale—April 22.
 Barn swallow and meadow lark—April 24.
 Oat bird—April 24.
 King bird—May 3.
 Rice bunting (bob-o-link)—May 15.
 Chimney swallow, humming bird, and scarlet tarriger—April 22.
 Red-head woodpecker—April 25.
 Wren Cuckoo—April 26.

RECORD OF BLOOMING OF SHRUBS, ETC.

Hepatica triloba bloomed April 8.
 Lilac and violets—April 27.
 Siberian crab apple—May 25.
 Tulip and hyacinth—May 25.
 Apple—May 29.
 Aquilegia and garden ranunculus—June 1.
 White clover—June 7.
 Peony and snow ball—June 8.
 June roses—June 28.
 Pear, plum, peach, cherry and grape flower buds all killed.

We had a very warm spell of weather the last of February, and then cold, stormy weather all through March. We had thunder showers on the 23d, 25th and 26th of April—then cold again—and on the 1st of May it snowed four or five inches, and at night froze ice one inch thick in tubs, etc. On the 19th of May, it snowed a little, and at night froze ice half an inch thick. On the 13th of June, there was a light hoar frost in the valleys. Notwithstanding our spring was so cold and backward, and summer unusually cool, grain of all kinds, even to corn, ripened and produced well. The first fall frost, severe enough to kill cucumber vines, was on the morning of October 27.—WM. HOWE, *North Almond, Alleg. Co., N. Y.*

FRUIT PROSPECTS.—At the present time (March 20) the prospects for fruit were never better. Some have feared that the cold storm of March 15 and 16 would injure the buds. But this is not the case. In fact, there was no danger at all. The buds are still dormant, and the ice with which they were encased so much from injuring them acted as a protection from the cold. They would have stood a very much lower degree of cold than any to which they were subjected. Later in the season, after the buds had started, such a coat of ice might have proved injurious.

We hear some complaints that the branches of trees in Western New York, especially of peaches, were much broken by the wind while encased in ice, but trust, and believe, that the damage is not as serious as was at first anticipated. Everything is yet favorable for a great fruit year.

AGRICULTURAL BOOKS PUBLISHED IN 1861.—A writer in the *Country Gentleman* gives the following list of books that were issued during the past year in this country, upon agricultural subjects. Notwithstanding the war excitement of the times, in no year since 1850, if we except 1859, have so many works of this kind been published. We fear, however, that the sales have not been such as to make the publishing investment profitable:

- ALLEN, L. F.—American Herd Book of Short Horn Cattle. Vol. 7. Buffalo, N. Y.: R. Wheeler & Co. 500 pp. \$5.
 ALLEN, STEPHEN L.—Fibrilla; A Practical Treatise on Flax Culture. Illustrated. Boston: A. Williams & Co. 75 cents.
 BRIGHT, WM.—The Single Stem, Dwarf, and Renewal System of Grape Culture. Second edition. Philadelphia, 180 pp. 50 cents.
 CLARKE, W. S.—Report on Horses, submitted to the Massachusetts Board of Agriculture. Boston: William White. 94 pp.
 EMERSON, GEORGE B., and FREY, CHARLES L.—A Manual of Agriculture, for the School, the Farm, and the Fireside. Boston: Swan, Brewer & Theson. 806 pp. 75 cents.
 GRAY, AS., M. D.—How Plants Grow: A Simple Introduction to Structural Botany. With a Popular Flora, or an Arrangement and Description of Common Plants, both Wild and Cultivated. Illustrated. Fifth edition. New York: Livingston, Plimney & Co. 75 cents.
 GOODALE, S. L.—The Principles of Breeding; or, *Gifts* of the Physiological Laws involved in the Reproduction and Improvement of Domestic Animals. Boston: Crosby, Nichols, Lee & Co. 164 pp. 75 cents.
 HARRIS, JOSEPH.—The Rural Annual and Horticultural Directory for 1862. Illustrated. Rochester, N. Y. 125 pp. 25 cents.
 HARRISON, J. S.—The Bee Keeper's Directory; or, The Theory and Practice of Bee Culture. San Francisco, Cal; H. H. Bancroft & Co. 440 pp.
 JOHNSON, S. W.—Lectures on Agricultural Chemistry; Delivered before the Smithsonian Institute at Washington.
 KLIPFART, J. H.—The Principles and Practice of Land Drainage. Illustrated. Cincinnati, Ohio; Robert Clark & Co. 42 pp. \$1.25.
 LAWES, J. B.—On the Sources of the Nitrogen of Vegetation. Philadelphia.
 MATHEW, EDWARD.—The Illustrated Horse Doctor. With an accurate account of the Diseases of the Horse, and the best mode of Treatment. New York: D. Appleton & Co. 8vo., 536 pp. \$2.50.
 ROWLANDSON, THOMAS.—The Sheep Breeder's Guide. With Rules for the Management and Breeding of Sheep, and a Description of the Varieties best Adapted to California, Oregon, and Washington Territory. San Francisco, Cal; J. Q. A. Warren. 350 pp. \$1.25.
 RANDOLPH, MISS C. J.—The Parlor Gardener; A Treatise on the House Culture of Ornamental Plants. Boston: J. E. Tilton & Co. 75 cents.
 THOMAS, J. J.—The Illustrated Annual Register of Rural Affairs for 1862; containing Practical Suggestions for the Farmer and Horticulturist. Albany, N. Y.: L. Tucker & Son. 144 pp. 25 cents.
 TUTTLE, J. H.—Barrie's Arabian Method of Horsemanship. 10 pp. 50 cents.
 TENBROOK, J. W.—The Sweet Potato Culturist. New York: G. M. Saxton. 95 pp. 25 cents.
 WOOD, A.—Class Book of Botany; being Outlines of the Structure, Physiology and Classification of Plants. New York: A. S. Barnes & Barr. \$2.

TEST YOUR SEEDS.—It will often save much vexatious loss and trouble in replanting, if the vitality of seeds was tested before sowing. This can easily be done by placing a few seeds on an inverted piece of sod and covering them with another piece of light sod, and keeping them moderately moist and warm for a short time. Count the seeds before you put them in, and you can thus ascertain what proportion will be likely to grow.

VETERINARY SURGEONS.—A correspondent writes us in reference to the great need of skillful veterinary surgeons in the United States and Canada. We fully agree with him, and hope that our young men will turn their attention to this inviting field of professional labors.

HOW TO PREPARE FEATHERS FOR BEDS.—In the February number of the *Genesee Farmer* there is an inquiry, "How to prepare feathers for beds." In my experience, they need no further care than a good baking, which our mothers and grandmothers effected by putting them in a bag in the oven, after the bread was taken out, until sufficiently dried to exclude the worm from the end of the quill. In our day, when most of us have no brick oven, the same object can be attained by placing the bag near the stove for a length of time.

Feather beds should be frequently sunned and used to keep the moth from them.—M. L. BEATTY, *Aurora, N. Y.*

Special Notices.

COE'S SUPERPHOSPHATE OF LIME.—The testimony in favor of the use of Coe's Superphosphate of Lime, is from the most reliable sources, and of so conclusive a character; that there should be no hesitation on the part of farmers and others to apply it in the culture of every description of farm crops. LEVI BARTLETT, one of the most intelligent and successful agriculturists in the country, writes as follows:

WARNER, N. H., Dec. 23, 1861.

Messrs. COE & Co.:—Your favor of the 14th inst. was duly received. In reply to your inquiries about the use and results of your Superphosphate of Lime in this vicinity the past Season, I am happy to say its application gave very general satisfaction—so much so that the testimony is strongly in favor of its use, and many that used it the past season will purchase more largely next spring.

The Superphosphate was mostly used for the corn crop; some of the farmers estimating the increase of the crop at least 25 per cent.

I procured a bag of your brand at Manchester, last spring, and also a bag of Peruvian Guano. I experimented with the two manures, in equal quantities, on different soils and crops—such as corn, potatoes, beans and turnips. In every instance the Superphosphate exhibited the most marked effect.

There has been but little Superphosphate used in this vicinity till last spring, and that mostly on the corn crop. I have no doubt further experiments would have shown it equally valuable on most of our farm crops—and much more so on the turnip tribe of plants. I used it freely in growing the Sweet German turnip, the bulbs averaging twice the size of any grown in previous years, on similar land and culture, except the Superphosphate. You are aware of the importance attached to Superphosphate in Great Britain, in the growth of turnips and other root crops. The nutrition of plants are the same the world over. The same manures found useful on the long-cultivated soil of Old England, will be found equally useful on the long-cultivated soil of New England. Among the artificially prepared manures in England, Superphosphate has a well deserved and high standing.

To give some idea of the expenditures of British farmers for bone dust and superphosphate of lime, I will give the following figures recently employed by Professor ANDERSON, of Glasgow, in a paper on "Analysis and Valuation of Manures":

| | |
|---|------------|
| Annual amount of bone dust, 40,000 tons, at 25..... | £240,000 |
| Annual amount of superphosphate, made from bone and bone ashes..... | 770,000 |
| Annual amount of superphosphates from coprolites..... | 860,000 |
| | £1,870,000 |

Or, in dollars, six million eight hundred and fifty thousand, annually expended for bone and superphosphate for manuring their "treated acres." English, Irish and Scotch farmers find it for their interest to purchase largely of commercial manures in addition to all that can be made upon their farms, which is generally managed with the most scrupulous care and economy. It will be well for our New England farmers to carefully test the experiment of using superphosphate.

(Signed)

LEVI BARTLETT.

CROUP.—The sudden changes of our climate are sources of PULMONARY, BRONCHIAL and ASTHMATIC AFFECTIONS. Experience having proved that simple remedies often act speedily and certainly, when taken in the early stages of the disease, recourse should at once be had to "*Brown's Bronchial Troches*," or Lozenges, let the Cold, Cough, or Irritation of the Throat be ever so slight, as by this precaution a more serious attack may be effectually warded off. *Public Speakers and Singers* will find them effectual for clearing and strengthening the voice.

From the *Evening Post, N. Y.*

BROWN'S BRONCHIAL TROCHES, advertised in another column, are highly recommended for public speakers and others, for the relief of colds and to clear the voice. Their efficacy is strongly attested by congressmen, clergymen, and actors and singers who use them. Among the certificates to their merits, we observe letters from Henry Ward Beecher, N. P. Willis, E. H. Chapin, and others of eminence.

CAUTION.—As there are many imitations, ask for and obtain

only "*Brown's Bronchial Troches*," which by long experience have proved their value, having received the sanction of physicians generally, and testimonials from eminent men throughout the country. See advertisement in another column.

ADVERTISEMENTS.

A FEW short advertisements of interest to farmers—and only such—will be inserted in the *Genesee Farmer* for twenty-five cents a line, or \$2.50 per square, each insertion, payable in advance. To secure insertion, they should be sent in by the 15th of the previous month. The *Farmer* has large lists of subscribers in every State and Territory, and in all the British Provinces. (It has nearly 5000 subscribers in Canada West alone.) There is no better or cheaper medium for advertising everything of general interest to rural residents in all parts of the United States and Canada.

We will also insert a few "Special Notices," if appropriate to our columns, at fifty cents a line.

MOLE PLOWS—By J. DUNHAM, Ithaca, N. Y. 3-4f

\$100 OR MORE may be made by any LOCAL AGENT, without leaving his home, besides rendering an important service to his neighbors and friends, by selling the OPORTO Grape Vines. For terms to agents, address E. WARE SYLVESTER, Lyons, N. Y.

EMPLOYMENT.—A NEW ENTERPRISE. The FRANKLIN SEWING MACHINE Co. want a number of active Local and Traveling Agents. A liberal salary and expenses paid, or commission allowed. Address, with stamp, HARRIS BROTHERS, Boston, Mass. (Clip this out for reference)

NURSERY STOCKS.

CHERRY, Pear and Quince, very first grade, from the Nursery of D. DAUVESSE, for sale by C. RAOUX, 78 Cedar street, New York. Agent for D. DAUVESSE, Orleans, France; FREDERICK and GLOBE, Sablons, France, and JOHN STEWART & SONS, Dundee, Scotland.

BEAN PLANTER—Patented 1860.

WE manufacture the cheapest and best Bean Planter in use. Worked by one Horse, Plants two rows at a time, and in hills. Rows from 25 to 30 inches apart, and hills 14 inches apart. Price \$12. WHITESIDE, BARNETT & CO., April—2t Brockport, Monroe Co., N. Y.

ITALIAN BEES.

ITALIAN QUEENS of brilliant color, purity guaranteed, forwarded by express to any part of the United States. Price, \$5 00. Cash to accompany the order.

No Dark colored Queens sent out from our Apiary. BAKER & TAYLOR, April—4t Hulmeville, Bucks County, Pa.

GRAPE VINES!

THOSE wishing to plant Vineyards or to buy Grape Vines by the quantity, will do well to apply to the undersigned.

A large and fine stock of Delaware, Concord, Rebecca, Logan, Cayahoga and Ontario, besides Clinton, Catawba and Isabella, and also a large number of varieties in smaller quantities, are offered at low rates. Address C. W. SEELYE, Rochester Central Nurseries.

VERBENAS BY MAIL.

A VERY fine collection of the finest varieties of Verbenas are offered for sale. For description of varieties, send for catalogue.

For \$1, we will send one dozen strong, healthy Plants to any address in the United States, postage paid. Address C. W. SEELYE, Rochester Central Nurseries.

French Imported Sugar Cane Seed by Mail.

ROBERT BUIST & SON, Seed Growers, Philadelphia, have just received, per Havre steamer, from Paris, a choice lot of PURE CHINESE SUGAR CANE SEED.

which they offer to Farmers and Planters at the following prices: BY EXPRESS, per lb., 40 cents. BY MAIL, postage paid, per lb., 60 cents.

Will also receive in two weeks, by sailing vessel, a large quantity, which they will offer to the trade at low rates.

Remittances to accompany orders. ROBERT BUIST & SON, SEED GROWERS AND NURSEMEN, Philadelphia, Pa. April—2t

**J. M. THORBURN & CO.'S
SEED WAREHOUSE,
15 John Street, New York.**

SEEDS BY MAIL

SEEDS FOR THE FARMER.

SEEDS FOR THE GARDENER.

SEEDS FOR THE FLORIST.

SEEDS FOR THE NURSERYMAN.

SEEDS FOR THE AMATEUR.

SEEDS FOR THE DEALER.

Send for our DESCRIPTIVE PRICED CATALOGUE OF VEGETABLE AND AGRICULTURAL SEEDS FOR 1862.

Send for our DESCRIPTIVE PRICED CATALOGUE OF FLOWER SEEDS FOR 1862.

The two combined contain the largest collection of seeds to be found in this country, embracing every standard and improved variety, together with all the NOVELTIES OF THE DAY.

GARNET CHILI POTATOES. A seedling introduced by C. E. Goodrich; he claims for it a higher degree of hardness and adaptation to all soils and weather than any other sort known, and in good soils and seasons, and with fair culture, they will yield from 250 to 350 BUSHELS TO THE ACRE.

Price per peck, 50c.; per bushel, \$1.50; per barrel or 2½ bushels, \$4.

All the following varieties of SEEDS mailed, *post-paid*, to any part of the United States, (with the exception of those marked thus *, which may be mailed to those wishing them by this conveyance, at an additional expense of one cent per oz.) on receipt of the amount annexed:

| | Cts. |
|---|----------------------------|
| New Speckled Lima Beans..... | per pkt. .25 |
| New Corrugated Pole do..... | do. .25 |
| Thorburn's Nonpareil Cauliflower..... | per oz. 75c. do. .10 |
| Early Paris do..... | do. 75c. do. .10 |
| Giant White Solid Celery..... | do. 20c. do. .5 |
| Improved N. Y. Purple Egg Plant..... | do. 60c. do. .10 |
| Early Winnings-salt Cabbage..... | do. 20c. do. .5 |
| New Cottager's Kale..... | do. 20c. do. .5 |
| Early Vienna Kohl Rabi..... | do. 20c. do. .5 |
| New Jersey Hybrid Cucumber (very long) do..... | do. 20c. do. .5 |
| Early Curled Silesia Lettuce..... | do. 20c. do. .5 |
| New White Japan Melon (early)..... | do. 25c. do. .25 |
| Huntington do. (very large)..... | do. 25c. do. .25 |
| Strawberry Watermelon..... | do. 25c. do. .25 |
| French Scarlet Turnip Radish..... | per oz. .10 |
| New Madras (edible pod) Radish..... | per pkt. .10 |
| Honolulu Nectarine Squash..... | per oz. .80 |
| F'jee Island Tomato..... | per oz. 25c. per pkt. .5 |
| French Upright do..... | do. .15 |
| Berlin Teltau Turnip..... | per oz. .10 |
| *Extra Early Princess Peas..... | per qt. .80 |
| *Champion of Scotland, Eugenie and Napoleon Peas, each..... | do. .50 |
| Large Sweet Mountain Pepper..... | per oz. 40c. per pkt. .5 |
| *Large Red Onion..... | per lb. 75c. per oz. .10 |
| Extra Early Turnip Best..... | do. 75c. do. .10 |
| Borage..... | do. .20 |
| Mammoth German Cabbage (extra)..... | do. .25 |
| *Long Orange Carrot..... | per lb. 75c. do. .10 |
| *Balsam Fir Seed..... | do. \$2.00 do. .25 |
| *Ailanthus Seed..... | do. 250 do. .25 |
| *Honey Locust Seed..... | do. 60 do. .10 |
| *Buckhorn Seed..... | do. 1.00 do. .10 |
| *Black Austrian Pine Seed..... | do. 3.00 do. .25 |
| *Stone Pine Seed..... | do. 1.50 do. .15 |
| *European Larch Seed..... | do. 1.50 do. .20 |
| *Chinese Arbor Vitæ Seed..... | do. 8.00 do. .25 |
| *Virgilia lutea, or Yellow Wood Tree (rare)..... | do. \$1.00 |
| *Apple Seed..... | per bush. \$5 per qt. .25 |
| *Plum Pits..... | do. .40 |
| Strawberry Seed, 12 varieties each..... | per pkt. .25 |
| Connecticut Seed Leaf Tobacco..... | per oz. .25 |
| *Alsike Clover..... | per lb. .75 |
| *Scarlet Flowering Clover..... | do. .50 |
| *Lucerne..... | do. .25 |
| *Chinese Sugar Cane..... | per bush. \$4. per qt. .25 |
| *Chiloree Seed..... | per lb. 75c. per oz. .10 |
| Beautiful Scarlet Chinese Egg Plant..... | per pkt. .10 |
| Convolvulus, tricolor monstrosus (splendid)..... | do. .10 |
| Callirhoe pedata (beautiful)..... | do. .25 |
| Dianthus Heddwigii..... | do. .25 |
| do. do. Double..... | do. .25 |

| | |
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| Dianthus laciniatus..... | per pkt. .25 |
| English Prize Hollyhock (fine)..... | do. .10 |
| Delphinium formosum (splendid)..... | do. .10 |
| do. tricolor..... | do. .10 |
| Auriclea flowered Sweet William..... | do. .10 |
| Ipomea limbata elegantissima (splendid)..... | do. .25 |
| Splendid Crimson Flax (beautiful)..... | do. .10 |
| Linum Lewisii Variegata (choice)..... | do. .25 |
| Obiliscaria pulcherrima..... | do. .25 |
| Splendid Hybrid Pansy..... | do. .10 |
| New Early Dwarf Carnation..... | do. .25 |
| Clintonia pulchella atropurpurea..... | do. .25 |
| do. Azura grandiflora..... | do. .25 |
| Lychnis Hageana..... | do. .25 |
| Fringed Chinese Primrose..... | do. .10 |
| Salvia Splendens..... | do. .25 |
| do. Argentea..... | do. .20 |
| do. Amabilis..... | do. .10 |
| Splendid Double Zinnia..... | do. .25 |
| Canna Warszewiczii..... | do. .25 |
| New Carmine Scabiosa..... | do. .10 |
| Maurandia Barclayana..... | do. .10 |
| Beautiful Camellia Balsams..... | do. .10 |
| Lilac Giant Emperor Aster..... | do. .10 |
| Perilla Nankinensis (very ornamental foliage)..... | do. .10 |
| Didiscus cerulea, beautiful, (blue annual)..... | do. .10 |
| Abronia umbellata (splendid annual)..... | do. .10 |
| Centraurus macrocephalus..... | do. .5 |
| Beautiful Collections Phlox Drummondii (5 varieties)..... | do. .40 |
| do. do. Portulacca (7 varieties)..... | do. .25 |
| do. do. of Flower Seeds (100 varieties)..... | do. .40 |
| do. do. do. (5 varieties)..... | do. .25 |
| do. do. do. (25 varieties)..... | do. .40 |
| do. do. do. (10 varieties)..... | do. .25 |

SPLENDID FRENCH HYBRID GLADIOLUS

From \$1 to \$20 per dozen—for varieties and description see our Flower Seed Catalogue.

J. M. THORBURN & CO.
15 John Street, New York.

N. B.—WHITE SILESIAN SUGAR BEET, pure and genuine, 3c. per lb., or at reduced rates in large quantities.

ROOTS FOR FEEDING STOCK.

- 1,000 lbs. **LONG RED MANGEL WURZEL BEET.**
- 1,500 lbs. **WHITE SUGAR BEET.**
- 500 lbs. **LONG ORANGE CARROT.**
- 5,000 lbs. **PURPLE TOP YELLOW RUTA BAGA.**
- 10,000 lbs. **RED TOP "STRAP-LEAVED" TURNIP.**

The Beets are Imported French; Carrots and Turnips of our own growth—all of which are WARRANTED first quality.

Forwarded by Express at 40, 30, 25, 40 and 40 cents per lb. Forwarded by Mail, "postage paid," at 60, 50, 35, 60 and 80 cents per lb.

Wholesale quantities at greatly reduced rates. Bestances to accompany all orders.

ROBERT BUIST & SON,
SEED GROWERS AND NURSERYMEN,
Philadelphia, Pa.

April—21

GRAPE VINES BY MAIL.

ONE DOLLAR will pay for any one of the following named varieties of Vines, which will be sent by mail, post free, to any part of the country:

- Concord, Gracelin, Cayahoga, Delaware, Diana, Elirab, Hartford Prolific, Rebecca, Logan, Ontario.

Parties wishing Catalogues will be furnished on application. Address C. W. SEELYE, Rochester Central Nursery.

NANSEMOND SWEET POTATOES.

NORTHERN Farmers can grow no more profitable crop near cities. Plants from 1st May till July. Price, 40c, \$1; 1/2 \$2; 5,000, \$9; 10,000, \$15. Packed and guaranteed to carry in good condition throughout the country.

Directions for Cultivation and Preservation sent gratis. Sent for one. Address M. M. MURRAY, Loveland, Clermont Co., Ohio.

April—21

WARS

AND rumors of wars have reduced the price of Nursery Trees. For Price List of Lyons Nursery, address E. WARE SYLVESTER Lyons, N. Y.

FOR SALE.—Thirty acres of land, at Harlem, Ill., eight miles from Chicago, and near the Railroad Station. Good for an Orchard or Market Garden. Price, \$60 per acre, with easy terms of payment. Apply to E. NORTH, Clinton, Oneida Co., N. Y.

1*

Grover & Baker's CELEBRATED NOISELESS SEWING MACHINES.

FOR

Family and Manufacturing Use,
495 BROADWAY, NEW YORK.

V. C. GOODWIN, 93 State St., Rochester, N. Y.

Agencies in all the principal Cities and Towns in the
United States.

THE GROVER & BAKER S. M. CO.

NOW OFFER IN ADDITION TO THEIR

SPLENDID STOCK OF MACHINES,

MAKING THE CELEBRATED

GROVER & BAKER STITCH,

NEW AND SUPERIOR

Shuttle, or "Lock-Stitch" Machines,

ADAPTED to all varieties of sewing. Much more Simple,
Durable, Noiseless and Perfect than any other "lock-stitch"
machines heretofore in use.

The Grover & Baker machines have taken the first pre-
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exhibited last year.

DWARF BROOM CORN SEED.

A NEW variety, which seldom grows more than four feet
high, and produces a greater weight of corn and of super-
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first time by
ROGERS & GEST,
April.—21 No. 133 Market St., Philadelphia, Pa.

A NEW GOOSEBERRY AND NEW RASPBERRY.

NATIVES of the Great West. The Gooseberry is smooth,
prolific, larger than Houghton, of fine flavor, and free from
mildew. The Raspberry is a Black Cap, better than Doodlett's
Improved. Circulars on application.
April.—21 HEFFRON & BEST, Utica, N. Y.

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NEW Verbenas, Petunias, Geraniums, Dahlias, Heliotropes,
&c., &c. Also, a large assortment of the best Gladioli and
Tuberose Bulbs.
HEFFRON & BEST,
April.—21 Utica, N. Y.

PRAIRIE FLOWER SEEDS.

A LARGE assortment of Prairie and other Flower and Gar-
den Seeds, at the Utica Union Nursery Depot.
Send for a Catalogue.
HEFFRON & BEST,
April.—21 Utica, N. Y.

"Short-Horns."

I HAVE for sale a few BULLS and BULL CALVES, COWS,
and HEIFERS, mostly by the Imported Bulls Duke of Glou-
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Jan.—4 JAMES O. SHELDON, Geneva, N. Y.

LARGE VINES—of the CONCORD, CREVELIN, DELA-
WARE, DIANA, HARTFORD PROLIFIC and REBECC-
CA. Prices low. Send stamp for Catalogue of over eighty var-
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HEFFRON & BEST,
April.—21 Utica, N. Y.

FOWLER'S PATENT STEAM PLOWING MACHINERY.

PATENT-RIGHTS for States and Counties and Machines are
now for sale. Descriptive pamphlets sent post free. Apply
to
B. W. EDDISON,
Jan.—4 608 South Delaware Avenue, Philadelphia.



"A SLIGHT COLD," Cough, Hoarseness,
or Sore Throat, which might be checked with a
simple remedy, if neglected, often terminates
seriously. Few are aware of the importance of
stopping a Cough of a "slight cold" in its
first stage; that which in the beginning would
yield to a mild remedy, if not attended to, soon
attacks the lungs.

"BROWN'S BRONCHIAL TROCHES" were first introduced eleven
years ago. It has been proved that they are the best article be-
fore the public for COUGHS, COLDS, BRONCHITIS, ASTHMA, CAT-
ARRH, the Hacking Cough in CONSUMPTION, and numerous af-
fections of the THROAT, giving immediate relief.

Public Speakers and Singers

will find them effectual for clearing and strengthening the voice.
"That trouble in my throat (for which the 'Troches' is a spec-
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N. P. WILLIS.

"I recommend their use to PUBLIC SPEAKERS."
REV. E. H. CHAPIN.

"Have proved extremely serviceable for HOARSENESS."
REV. H. W. BEECHER.

"Almost instant relief in the distressing labor of breathing pec-
uliar to Asthma."
REV. A. C. EGGLESTON.

"Contain no Opium or anything injurious."
DR. A. A. HAYES, Chemist, Boston.

"A simple and pleasant combination for COUGHS, &c."
DR. G. F. BIGELOW, Boston.

"Beneficial in BRONCHITIS."
DR. J. F. W. LANE, Boston.

"I have proved them excellent for WHOOPING COUGH."
REV. H. W. WARREN, Boston.

"Beneficial when compelled to speak, suffering from COLD."
REV. S. J. P. ANDERSON, St. Louis.

"I have been much afflicted with BRONCHIAL AFFECTION, produ-
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remedy, giving power and clearness to the voice."
REV. GEORGE SLACK,
Minister Church of Eng and,
Milton Parsonage, Canada.

"Two or three times I have been attacked by BRONCHITIS, so
as to make me fear that I should be compelled to desist from mi-
nisterial labors, through disorder of the throat. But from a mod-
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ly, for weeks together, without the slightest inconvenience."
REV. E. B. RYCKMAN, A. B.,
Wesleyan Minister, Montreal.

From Rev. HENRY WILKES, D. D., Pastor Zion Church,
Montreal:
"When somewhat hoarse from cold or over-exertion in public
speaking, I have uniformly found Brown's Troches to afford re-
lief."

CAUTION.

The market is full of imitations, represented to be the same as
"Brown's Bronchial Troches," which are in most cases produc-
tive of positive injury. Many dealers will recommend inferior
preparations and lower priced articles, affording more profit to
themselves. Ask for and obtain only "Brown's Bronchial Tro-
ches," which by long experience have proved their value, having
received the sanction of physicians generally, and testimonials
from eminent men throughout the country.

Sold by all Druggists and Dealers in Medicine, at 25 cents
per box.

WM. PATERSON'S

Improved Superphosphate of Lime,
MANUFACTURED and for sale at Division Street Wharf,
Newark, N. J., and by the manufacturer's agents in this and
other States.

CIRCULARS, with particular instructions for its use, will be
sent by mail when requested, or on application to his agents.

WM. PATERSON,

The oldest manufacturer of Superphosphate of Lime in the
Union.
April—31

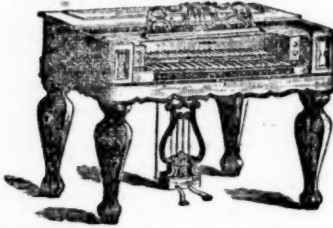
ITALIAN QUEEN BEES.

I SHALL continue to breed this season from my well known
stock of Italian Bees, imported in March, 1861, by steamer
New York. I guarantee the perfect purity of my Queens, being
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Only Six Live Original Italian Queens

in the United States.
To suit the times, I have reduced my price to \$7.50 for a
Queen and a few hundred workers. For particulars apply to
C. W. ROSE,
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IMPROVED PATENT
MELODEONS.
Warranted for Five Years.



THE Oldest Establishment in the United States, employing 200 men, and finishing 80 instruments per week.

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LIST OF PRICES.

PRICES OF PORTABLE INSTRUMENTS.

Four Octave, C to C, \$45.
Four and a half Octave, C to F, \$60.
Five Octave, F to F, \$75.
Five Octave, Double Reed, F to F, \$130.

PRICES OF PIANO CASES.

Five Octave, F to F, \$100.
Six Octave, F to F, \$130.
Five Octave, Double Reed, F to F, \$150.
Five Octave, Two Banks of Keys, \$200.

ORGAN MELODEON.—Two Banks of Keys, Five Sets of Reeds, Eight Stops, One and a Half Octave Foot Pedals, One Set of Reeds in Pedal Bass Independent, \$350.

ORGAN MELODEON.—One Bank of Keys, Three Sets of Reeds, Six Stops, One and a Half Octave Foot Pedals, \$250. One Set of Reeds in Pedal Bass Independent, \$25 extra.

OUR LATEST IMPROVEMENT—PRINCE & CO.'S GRADUATED SWELL.

Patented September 17, 1861.

This is an entirely new idea, and its want has been noticed by all acquainted with Reed Instruments. The old swell could never be made to operate gradually; the instant the pedal was touched for opening it, the change would be instantaneous and abrupt.

OUR NEW SWELL is constructed on scientific principles, and we are satisfied, by our unerring study and experiments, that it is the only one by which the tone of Reed Instruments may be graduated from a mere whisper to the full power of the instrument, and *vice versa*. The volume of tone is also very much increased by this swell, and is now all that we could desire.

This, in connection with our DIVIDED SWELL (which we patented in 1855), will be added to all the Melodeons which we manufacture in the future, and without extra charge. One other feature in our Melodeons is the IMPROVED VALVE OR PALLET, being a combination of cloth and leather, prepared expressly for the purpose. This valve we have used for the past three years, and we find it to be the very thing that has been so long needed as a substitute for the India Rubber Valve, which has been in general use since Melodeons have been manufactured, and which has caused so much trouble by the *disjoining and sticking of the India Rubber*. All of our instruments are now finished with this improved valve, and we can recommend them with confidence.

Persons unacquainted with the Melodeon and its history, will bear in mind that we are the pioneers and leading manufacturers, not only in the United States, but in the world. We commenced the manufacture of Melodeons in the fall of the year 1847, and since that time have finished and sold TWENTY-SEVEN THOUSAND. These instruments are now in use mostly in the United States and Canada, but also in Europe, Asia, Africa, South America and the West Indies, and from all these quarters we have the most flattering testimonials of the high estimation in which they are held. AT ALL INDUSTRIAL EXHIBITIONS THEY HAVE INVARIABLY BEEN AWARDED THE HIGHEST PREMIUM WHENEVER EXHIBITED IN COMPETITION WITH OTHERS.

We shall take pleasure in forwarding by mail (at our own expense) our Illustrated Catalogue, in which every instrument we

manufacture is fully described, and illustrated by elegant engravings.

All Melodeons of our manufacture, either sold by us or dealers in any part of the United States or Canada, are warranted to be perfect in every respect, and should any repairs be necessary before the expiration of five years from date of sale, we hold ourselves ready and willing to make the same free of charge, provided the injury is not caused by accident or design.

Agents for the sale of our Melodeons may be found in all the principal towns of the United States and Canada.

Address either

GEO. A. PRINCE & CO., Buffalo, N. Y.

GEO. A. PRINCE & CO., 87 Fulton street, New York.

GEO. A. PRINCE & CO., 82 Lake street, Chicago, Ill.
Or either of the above wholesale agents.

Sale of Imported Thorough-bred Cattle.

THE subscriber offers for sale the whole of his lately imported herd of Improved Short-horns, with their produce, chiefly of the Booth blood. Full pedigrees for each, authenticated by reference to Coates' English Herd Book—to be seen till the 15th of April next.

Woodford, Ogdensburg, N. Y.

P. S. Five of the cows have been served this year by an imported Bull, and are supposed to be with calf.

FOR SEWING MACHINES.

JONAS BROOK & BROTHERS'

PRIZE MEDAL SPOOL COTTON,

200 or 500 yard spools, White, Black, and Colored.

FOR MACHINES, use BROOK'S PATENT GLACE for upper thread, and BROOK'S SIX CO-D RED TICKET for under thread. Sold by all first class dealers in city and country; also in cases of 100 dozen each, assor ed numbers, by WM. HENRY SMITH, Sole Agent, 56 Vesey street, New York. Ja-ly

PERUVIAN GUANO,

GOVERNMENT Brand and Weight,
SUPERPHOSPHATE OF LIME.

BONE DUST,

LAND PLASTER,

A. LONGETT,

For sale by

84 Cliff street, corner of Fulton, N. Y.

16 ACRES STRAWBERRIES.

JENNY LIND (very early and prolific), WILSON'S ALBANY and PYRAMID CHILLIAN, plants \$3 per 1,000, and 10,000 for \$25.

CRANBERRY PLANTS, \$2 per 1,000.

RASPBERRIES (six varieties), \$10 to \$20 per 1,000.

Address
April—11*
A. M. PURDY,
South Bend, Indiana.

LAWTON BLACKBERRIES AND RASPBERRIES.

I WILL sell Lawton Blackberries this season for \$3 per 100, or \$20 per 1,000—fine plants.

RASPBERRIES.

Merrville d'4 Seasons, Belle d'Fonteny (everbearing), and Purple Cane, \$1 per doz., \$5 per 100. Kirland's Seedling and Doolittle's Black, \$3 per 100, \$20 per 1000. H. B. LUM,
Sandusky City, Ohio.

FOR SALE—By the subscriber, a MORGAN BLACK HAWK STALLION, sired by Black Hawk, Jr., is five years old, and stands fifteen and a half hands high. Is a beautiful mahogany bay, with black legs, mane and tail. Weighs about 1100 lbs. when in good condition. Is compactly built, possessing remarkable intelligence and muscular powers, having a strong, vigorous constitution. Has an easy, open gait, and bids fair to make a fast traveler.
JACOB HOUSTATER,
Pekin, Niagara Co., N. Y.

ONTARIO GRAPES. NATIVE WINES.

GOOD, strong, well-sorted Vines, true to name, and grown by myself from wood from the original vine. Price, \$3 each, or \$16 per dozen.

PRESBRY'S NATIVE WINES.—The pure juice of the Grapes, Isabella, Port and Sherry received the first premium at the New York State Fairs of 1860 and '61. \$3 per gallon, \$7.75 per doz.
OTIS F. PRESBRY,
Prospect Hill Vineyard, Buffalo, N. Y.

AGRICULTURAL IMPLEMENTS.

A GOOD assortment, for sale by
A. LONGETT, 84 Cliff street, cor. of Fulton, New York.

Everybody should have a Copy.

**Rural Annual and Horticultural Directory,
FOR 1882.**

PRICE ONLY TWENTY-FIVE CENTS!

THE *Rural Annual and Horticultural Directory* is a book of 120 pages, published at the beginning of each year, at the office of the *Genesee Farmer*. It is filled with matter interesting and useful to every one engaged in the culture of the soil, in town, village, country or city.

Among the contents will be found articles on the following subjects:

- PLANTING-FRUIT TREES;
- ANNUALS AND THEIR CULTURE;
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- MANUFACTURE OF DOMESTIC WINES;
- CULTURE OF DWARF AND STANDARD PEARS;
- CULTIVATION OF THE CEREALS;
- ON CIDER MAKING;
- AMOUNT OF ROOTS FROM CLOVER AND GRASSES;
- CUTTING POTATOES FOR PLANTING;
- CHINESE HOGS;
- HENS AND THEIR MANAGEMENT;
- CULTURE OF THE PEACH IN THE MIDDLE STATES;
- COVERING GRAPE VINES IN WINTER;
- TREATMENT OF MILCH COWS;
- APPLICATION OF MANURE;
- CULTURE OF WHITE BEANS;
- THE ENGLISH MUTTON SHEEP,

With a great variety of other matters of general interest.

Price only 25 cents. It will be sent prepaid by return mail to any address. Send the money in postage stamps.

Address
JOSEPH HARRIS,
Publisher of the *Genesee Farmer* and *Rural Annual*,
Rochester, N. Y.

The *Rural Annual* has been published seven years. The seven numbers—for the years 1856, '57, '58, '59, '60, '61 and '62—will be sent, prepaid, by return mail, to any address for \$1.40.

Marblehead Cabbage Seed.

STONE MASON CABBAGE.—I have received numerous letters from farmers residing in Canada and all the Northern, Middle and Western States, who purchased seed last season, expressing the highest satisfaction with this Cabbage—its reliability for heading, the large size of the head, the peculiar sweetness and hardness of the head, and first-rate keeping qualities. A large number took the first premiums at the Fairs of their respective counties. A number write that every plant set a handsome head; one that he sold \$50 worth from less than a seven-eighth of an acre of land. I have copied a number of these letters into my Seed Catalogue.

MARBLEHEAD MAMMOTH DRUMHEAD.—Numbers have written me of their success with this monster variety; that they raised cabbages weighing from 25 to 45 lbs.—the general wonder of the community. They have been raised weighing 62 lbs. I regret that I have but a limited supply of seed this season. I will fill orders as long as it lasts.

Stone Mason Cabbage, per ounce, I prepaying postage, 25 cts.; per lb., \$2.67. Marblehead Mammoth, per package of about 1000 seeds, 25 cents. Hubbard Squash, per package, 12 cents.

The seed is of my own raising, and warranted of the purest quality grown.

CATALOGUES forwarded to applicants, of every variety of Garden seeds and many hundred varieties of Flower seeds.

JAMES J. H. GREGORY,

March.—St Marblehead, Mass.

The Cheapest and Best

**LITERARY MAGAZINE IN THE WORLD
IS THE**

FIVE CENT MONTHLY.

EACH number contains 82 bound pages of choice Original Romances, Tales, Sketches, Poems and Criticism. ONLY 5 cents a number. Subscription price, 50 cents a year, by mail to any address. Specimen copies sent upon the receipt of two red stamps. Address E. H. BULLARD & CO., Publishers, 87 Cornhill, Boston, Mass. March.—St

\$100 PER MONTH—Made by any one with Stencil Tools. For a circular explaining the business, Address **JOHN MILLIKEN,** Lawrence, Mass. May.—ly.

Books for Farmers and Fruit Growers.

THE following works on Agriculture, Horticulture, &c., may be obtained at the Office of the *GENESEE FARMER*:

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| American Florist's Guide.. | 75 | Quimby's Mysteries of Bee-keeping Explained..... | 1 00 |
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| Brown's Bird Fancier..... | 25 & 50 | Richardson on the Hog..... | 25 |
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| Every Lady her own Flower Garden..... | 50 | (First five vols. do., 1856-7-8-9 and 60, sent for..... | 1 00 |
| Farm Drainage, (H. F. French)..... | 1 00 | Rodgers' Scientific Agriculture..... | 75 |
| Genesee Farmer (bound volumes) each..... | 1 00 | Rural Poetry of the English Language, (a beautiful book for a present)..... | 3 00 |
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| Miner's Bee-keeper's Manual..... | 25 | The Horse Cultivat'g..... | 25 & 50 |
| Modern Cookery, by Miss Acton and Mrs. S. J. Hale 1 00 | | The Rose and his Diseases Wilson on Flax..... | 1 25 |
| Nash's Practical Horse Rier..... | 50 | Yonatt on the Horse..... | 25 |
| | | Do. on Sheep..... | 75 |
| | | Do. on the Hog..... | 75 |

Any of the above named works will be forwarded by mail post-paid, on receipt of the price specified.

Address **JOSEPH HARRIS,** Rochester, N. Y.

SCHENECTADY AGRICULTURAL WORKS,

G. WESTINGHOUSE & CO., Proprietors,

MANUFACTURE Endless Chain or Railway Powers, for One, Two and Three Horses; Four and Eight Horse Lever Powers, Combined Threshers and Cleaners, Threshers and Vibrating Separators, Clover Machines with Huller and Cleaner combined—also, with Thresher, Huller and Cleaner combined; Wood Sawing Machines, both Circular and Drag; Cider Mills and Corn Shellers combined; Dog or Sheep Powers, &c.

For Descriptions and Prices of above named articles, apply for an Illustrated Circular. Address

G. WESTINGHOUSE & CO.,

March.—St Schenectady, N. Y.

SEEDS! GARDEN SEEDS!

FROM HALLOCK'S SEED AND AGRICULTURAL WAREHOUSE.—The subscriber will forward by mail, postage paid to any address in the United States, a package of twenty sixpenny papers, well filled with good and reliable vegetable seeds, of good varieties to supply the garden, on receipt of \$1 by mail. A part Flower seeds will be substituted if desired. Send on your orders. If you wish any particular varieties, name them and they will be substituted if they are to be had in this market. Address

March.—2^d **E. D. HALLOCK, AGT.,** Rochester, N. Y.

Concord Grape Vines.

I WOULD give notice that I shall not be able to supply Vines for any more Vineyards till next fall, when I shall have about 30,000 more vines to sell, 50 per cent. lower than others ask, and on a year's credit! I will, however, sell a few the coming spring, one year old vines, grown in the open air, at \$3 per dozen. The Concord is going up with a rush, ahead of the Delaware, and every other variety.

March.—St **T. B. MINER,** Clinton, N. Y.

The New Lettuce.

TRUE BOSTON CURLED LETTUCE.—I introduce this new variety as surpassing all varieties of the Lettuce family in excellence and elegance. I would invite attention to the rare beauty of its structure and unequalled symmetry of its growth. It is perfectly hardy. Packages containing seed sufficient to supply a family for a season, with directions for cultivation, post paid, 20 cents each; six packages, \$1. Every variety of garden seed for sale. Catalogues gratis.

Feb.—2^d **JAMES J. H. GREGORY,** Marblehead, Mass.

WOOD CUTS FOR SALE.

WE will sell Stereotypes of the Wood Cuts used in the *Genesee Farmer* and *Rural Annual and Horticultural Directory*. A book containing impressions of over Seven Hundred of these cuts will be sent to those wishing to purchase on the receipt of 50 cents. The book contains an index, showing where descriptions of the cuts will be found.

Address **JOSEPH HARRIS,** ROCHESTER, N. Y.

28 CENTS EACH.—MICROSCOPES magnifying 500 times. Five of different powers. \$1. Mailed free. Mar.—3^d **F. H. BOWEN,** Box 220, Boston, Mass.

PREMIUMS!
PREMIUMS! PREMIUMS!
 To Every Reader of the Genesee Farmer.

ALL PRIZES AND NO BLANKS!

How to Do Good and Get Pay for it.

GREAT PAY FOR LITTLE WORK!

Being desirous of doubling the circulation of the *Genesee Farmer* the present year, we have concluded to offer the following Premiums to those who send us subscribers:

Book Premiums.

1. To every person who sends us the name of one subscriber to the *Genesee Farmer* for the year 1862, and 50 cents, we will send a copy of The Young Housekeeper and Dairymaid's Directory, by Mrs. ELIZA A. CALL, or one copy of the *Rural Annual and Horticultural Directory* for 1860 or 1861, sent prepaid by return mail.
2. To every person who sends us two subscribers and one dollar, we will send the *Rural Annual and Horticultural Directory* for 1860 and 1861, prepaid by return mail.
3. To every person who sends us three subscribers and \$1.50, we will send a copy of Liebig's Animal Chemistry, or three numbers of the *Rural Annual*.
4. To every person who sends us four subscribers and \$2.00, we will send one copy of the Farmers' Practical Horse Farcy, prepaid, by return mail.
5. To every person who sends us five subscribers and \$2.50, we will send one copy of the *Genesee Farmer* for 1856, nicely bound in stiff paper covers, prepaid, by return mail.
6. To every person sending us six subscribers and \$3.00, we will send Rogers' Scientific Agriculture, or a handsomely bound volume of the *Genesee Farmer* for 1860, prepaid, by return mail. [The invariable price of the latter is \$1.00, and there is no cheaper work.]
7. To every person sending us seven subscribers at 50 cents each, we will send one copy of Mrs. S. J. HALE'S Modern Cookery, prepaid, by return mail.
8. To every person sending us eight subscribers at 50 cents each, we will send a copy of The Horse and his Diseases, or a copy of Everybody's Lawyer, prepaid, by return mail.
9. To every person sending us twenty subscribers at 50 cents each, we will send a copy of The Rural Poetry of the English Language, the best and handsomest work of the kind published.
10. To the person sending us eighty subscribers at 50 cents each, we will send Morton's Cyclopedia of Agriculture, prepaid, by return mail. This is the best work on agriculture extant and sells for \$18.00.

Seeds, Grape Vines, Fruit Trees, etc.

11. To every person sending us two subscribers, at 50 cents each, we will send a package of Flower Seeds, containing six papers of the choicest and best seeds imported from France and England, and which sell at from six to ten cents each. They will be forwarded, prepaid, by return mail.
12. To every person sending us three subscribers at 50 cents each, we will send, prepaid, by return mail, ten papers of choice imported Flower Seeds.
13. To every person sending us four subscribers at 50 cents

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